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Adele's pianist on his ambient electronics

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MPE MVPs
Must-have multidimensional synths and controllers

Donner B1
Has this budget 303-alike got what it takes?

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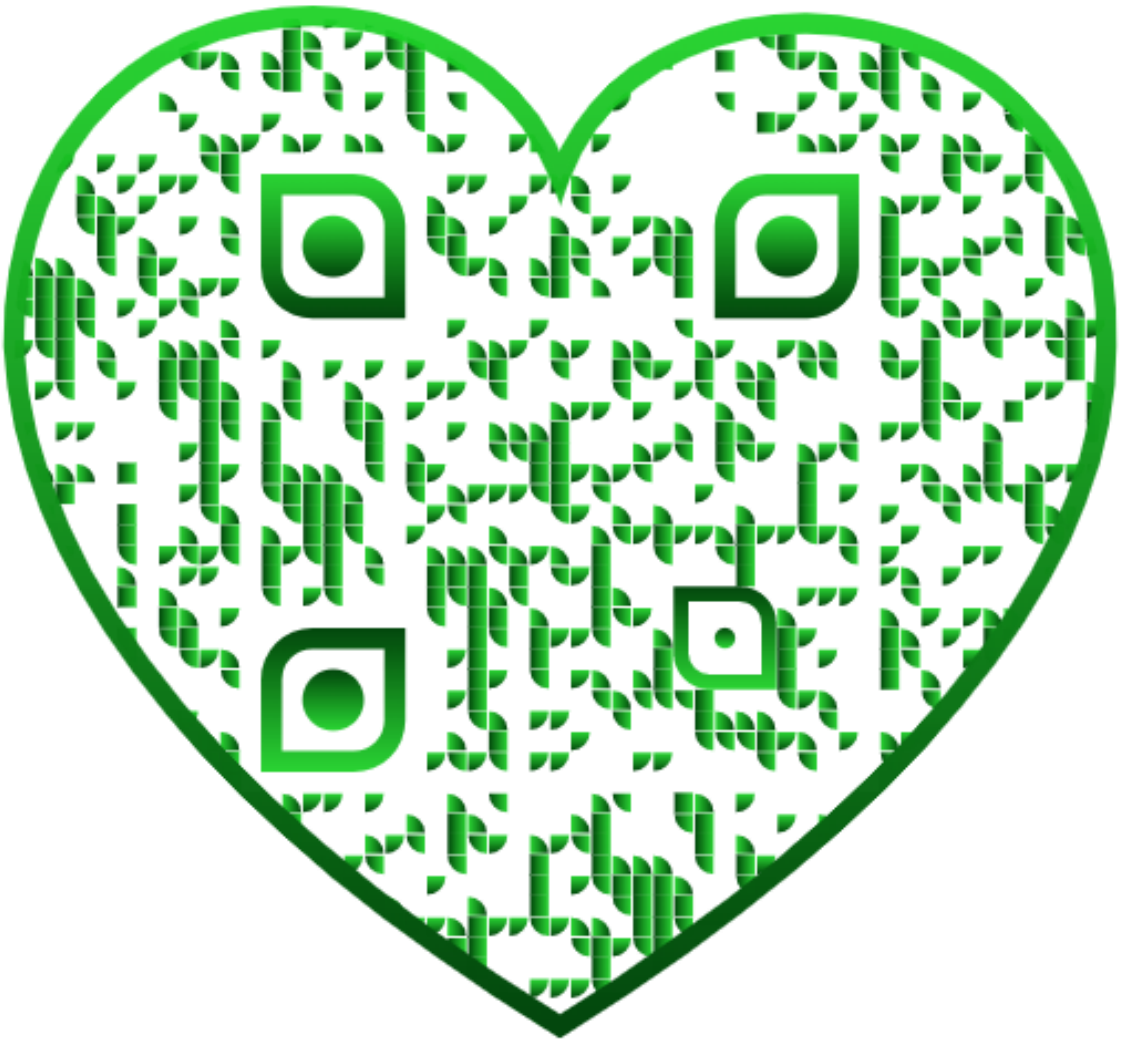
ROLAND SH-4D

In-depth review: Is this Roland's next future classic groovebox?

FUTURE



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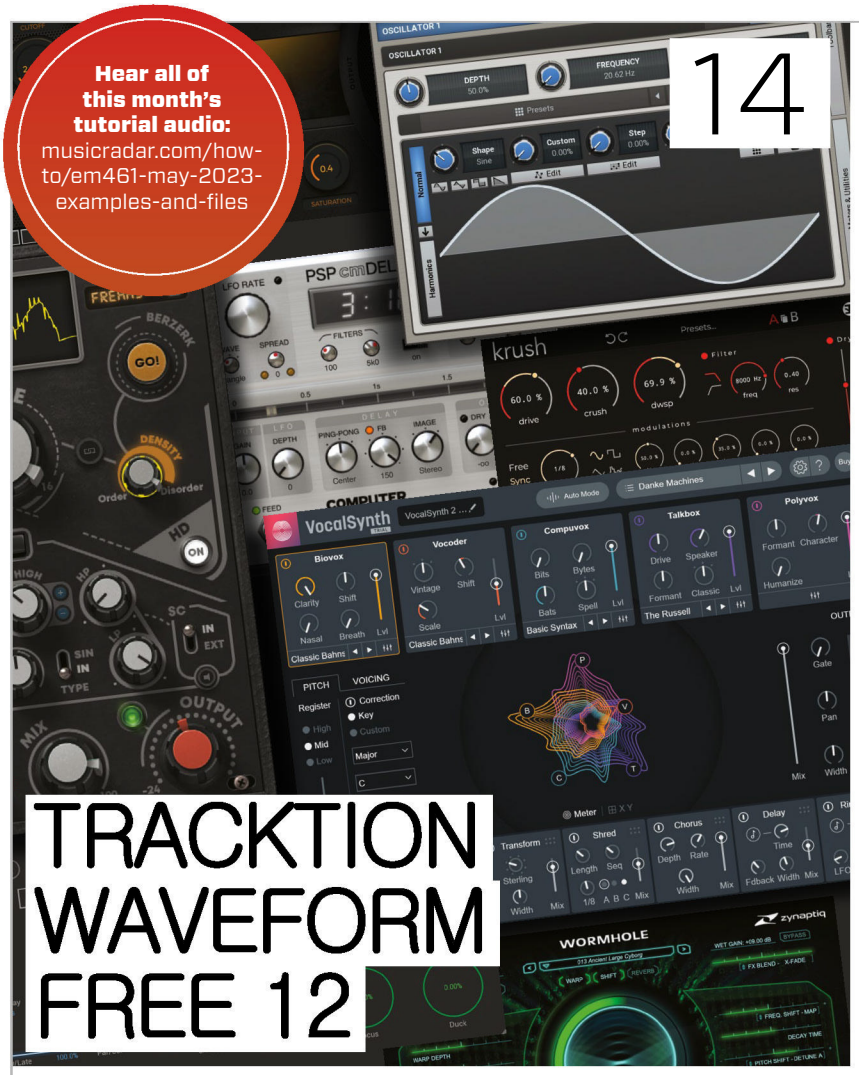

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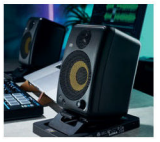

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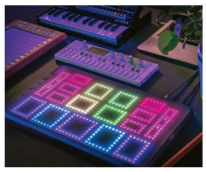

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Editor's Note

Something new

When it comes to being creative, sometimes there's nothing quite as inspiring as trying something new. If, as I'd assume is true of many readers, you've been making music for some time, it's incredibly easy to sink into routines and patterns that can drain the creative spark. Perhaps you've always composed, arranged or mixed using certain tools or templates, which can be great for speed and efficiency, but also lead us to regularly generating the same results. Sometimes introducing a new tool, approach or collaborator can kick us out of our old habits and fire a fresh creative spark.

Our two lead tutorials this issue are each, in their own way, aimed at suggesting a potential new approach. Firstly, we're taking an introductory deep-dive into the latest version of Tracktion's Waveform Free. Yes, it's yet another DAW, when you may already have one or more at your fingertips, but in its latest iteration Waveform features some smart tools and interesting approaches that make it a nice addition to your arsenal. And given that you can get stuck in with a free, expandable version, it could be worth a try.

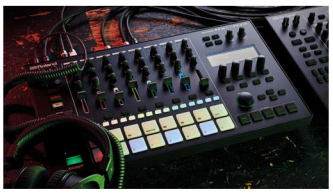
Then in this issue's Masterclass feature, we're returning to the world of MPE for a run-down of the best controllers and plugins. Given the performance, composition and modulation possibilities these 'multidimensional' devices offer – even for non-key players – there's a multitude of ways you could discover a new approach to playing.

As for me, my 'new thing' this month has been this issue's cover star, Roland's excellent SH-4d groovebox; an exciting mix of virtual analog, digital synthesis and rhythmic sequencing fun.

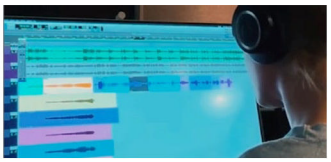
SI TRUSS
EDITOR-IN-CHIEF

Editor's choice

FROM THE ISSUE:
Neil Cowley
Jazz pianist and electronic tinkerer Neil cowley has found himself in the rare position of not being a household name, but having played on some of the biggest pop songs of the past two decades.
Interview: Page 22



FROM THE ARCHIVE:
Roland MC-707
This issue's cover star, the SH-4d groovebox, is the best thing the Japanese heavyweights have released in recent years, but it's far from the company's first impressive groovebox. Check out their last solid offering, 2019's 707.
See more: bit.ly/EMmc707



AROUND THE WEB:
Grande wizard
You've likely heard of pop star Ariana Grande, but did you know she's something of a Pro Tools wizard? Watch her show off her speed vocal editing and comping skills if you don't believe us. **See more: bit.ly/EMgrandePT**

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NEW GEAR

CHERRY AUDIO UNVEIL SUPERCHARGED JUPITER EMULATION, MERCURY-6

Considered by many to be the underrated dark horse of the vintage Roland Jupiter polysynth herd, the Jupiter-6 is getting some deserved time in the spotlight thanks to a new plugin emulation from Cherry Audio: the Mercury-6.

Released in 1983, the Jupiter-6 might have had two fewer voices than the Jupiter-8, but it set itself apart by offering an aggressive true multimode filter with 24dB/oct lowpass, 24dB/oct highpass and 12dB/oct bandpass modes. This harder edge makes it great for creating biting techno and electro.

Other notable features included support for multiple simultaneous waveforms in the oscillators and extensive modulation possibilities courtesy of the two LFOs and cross-mod capabilities. There were solo and poly unison modes, too.

Cherry Audio's reboot promises all of this, while also addressing some of the Jupiter-6's limitations. To wit, Mercury-6 offers velocity sensitivity, an improved split mode, and a layer mode that enables you to stack two different sounds simultaneously with per-layer stereo panning, detuning and sustain.

Polyphony has been upped to 16 notes – a no-brainer, really – and not only does the arpeggiator emulate the original's down/up mode, but it also has a new random mode and MIDI tempo sync. Chord memory enables you to save multiple notes to a single keypress and play them back, and the aforementioned LFOs have a retrigger for LFO-1 and an always-on option for LFO-2, both syncable to MIDI tempo.

There's now a dedicated effects panel that offers access to the distortion, phaser, flanger/chorus, delay and reverb processors, while further features include per-layer drift control, 500 presets and MIDI mapping.

Mercury-6 looks like a fine marriage of the vintage and the modern, then, and if Cherry Audio's previous emulations are anything to go by, it should sound pretty good, too.

Mercury-6 runs on PC and Mac in VST/AU/AAX formats and costs $69.

MINIMAL AUDIO RELEASE CLUSTER DELAY

Minimal Audio have announced the release of a new effects plugin, Cluster Delay. A powerful and full-featured multi-tap delay, the plugin's capable of producing a rich variety of delay effects from simple, functional repeats to experimental sonic textures and expansive soundscapes.

A new plugin from the developers behind Rift and Morph EQ, Cluster Delay enables the user to fine-tune delay sequences of up to eight taps, shaping these in real time by tweaking controls for ramp, space and scatter. The delay can then be routed through six effects for further processing: Diffusion, Chorus, Wobble, Frequency Shifter, Phaser, and Flanger.

Cluster Delay features controls for spread and crossfeed, making it easy to produce lush, spatialized delays that span the stereo field. For those who crave the sound of analog hardware, there's an option to introduce analog modeling to the signal, while the Wobble effect will produce tape-like tones in a similar fashion to the wow and flutter controls found on many other delay plugins and effects units. The plugin's outfitted with a clean, easy-to-navigate GUI that visualizes the delay pattern while making the most important controls easily accessible. Cluster Delay arrives loaded with 100 presets that, if the audio examples on Minimal Audio's website are anything to go by, sound pretty good.

BEHRINGER CONFIRM DETAILS OF THEIR MOOG TAURUS EMULATION

Almost exactly a year ago, Behringer announced the Toro – a budget emulation of the Moog Taurus Revision 1 bass synth. The good news is that we now have a proper demo to look at and listen to; the bad news is that the Toro is going to cost significantly more than originally planned.

Behringer had said that it hoped to bring the Toro to market for a reasonable $199, but that projected price has now risen to $349. This means that, while it's still pretty affordable – particularly in comparison to Moog's own Taurus III, which was released in 2010 and cost a couple of grand – the Toro is on longer the bargain basement synth you might have been hoping for.

The sound, though, seems right on the money. This is a pure analog instrument with two oscillators, a low-pass ladder filter and two envelopes, plus four quick-access preset buttons. Although it's primarily a bass synth, the Toro has a five-octave range, while connectivity includes MIDI, USB and CV. There's Eurorack compatibility, too.

What you don't get are the original Taurus's trademark foot pedals. These made the synth a firm favourite with prog bands such as Genesis, Yes, Pink Floyd and Rush (Geddy Lee is a particularly notable Taurus player).

In truth, a lot of Behringer's potential Toro customers won't miss them – foot-controlled bass synths have niche appeal, and you can always plug in a set of MIDI pedals – but their absence certainly represents a big point of difference in comparison to Moog's original.

A release date has yet to be confirmed.

KORG'S FULL-SIZE ARP ODYSSEY IS BACK, BUT THIS TIME YOU'LL HAVE TO BUILD IT YOURSELF

When Korg launched its first ARP Odyssey reboot back in 2015, little did we know that this was just the start of its emulative endeavors. In addition to this scaled-down synth we also got a module, an iOS app, a plugin and a limited-edition full-size version, and now that so-called 'FS' model is back in kit form.

Yep, this is a big ol' Odyssey that you can build yourself. You don't need to be an electrical engineer in order to assemble it, either – we're assured that the ARP Odyssey FS Kit doesn't require any prior technical knowledge or soldering skill on the part of the user.

A pictorial guide is supplied to help you on your way, and each synth comes with its own serial number engraved into a metal plate, giving it an element of uniqueness.

The circuitry is exactly the same as in the original ARP Odyssey FS, and there's a full-size keyboard, too. The synth is based on the Rev 3 version of the original, but you can switch between the filter models from all three of the original Odysseys.

The familiar spec sheet includes the Odyssey's switchable sawtooth and square waveforms, pulse width modulation, oscillator sync, ring modulation and pink or white noise. Connectivity includes both 1/4-inch jack and XLR outputs and an audio input jack – try connecting the headphone jack to the audio input to apply self-feedback. CV, Gate and Trig jacks are here, too, as are MIDI In and USB MIDI ports. 1/4-inch and mini patch cables come supplied.

Released in 1972, the Odyssey was ARP's answer to the Minimoog, with its slider-based interface making it extremely tweakable. It was embraced by two generations of musicians – the proggers and rockers of the early 1970s (Edgar Winter, Tony Banks and Joe Zawinul) and the new wavers of the 1980s (Devo, Ultravox and Gary Numan) – and remains hugely popular today.

Available in limited numbers, the ARP Odyssey Kit will be released in March priced at $1,899.

RELIQ IS A "HYBRID CONTROL SURFACE" THAT CAN ROUTE AND MIX AUDIO

Looking a little bit like a lot of other products but also different to anything else, Reliq is a new matrix-based "hybrid control surface" that can be used to route and mix audio, sequence your music and control your DAW.

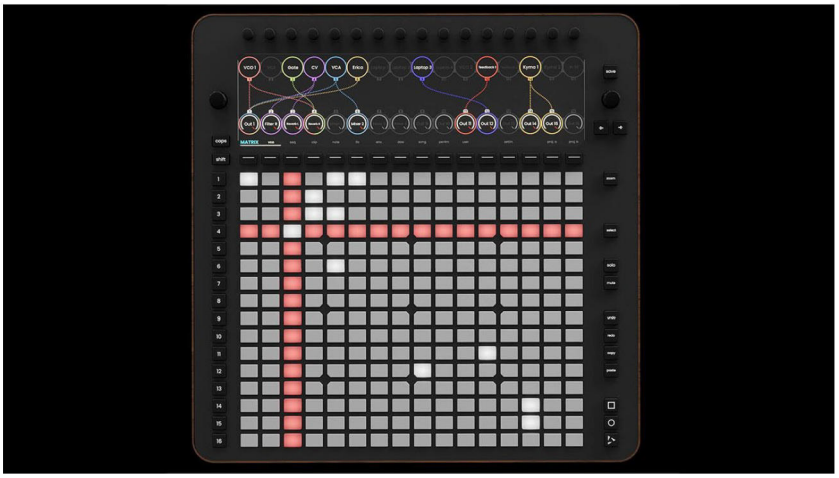
The majority of Reliq's top surface is taken up by a 16x16 grid of buttons. This can be used to connect any input to any output with a single press, and you can store and recall signal routings in real time.

When in its sequencing guise, Reliq offers 16 polyphonic sequencers, while modes include Euclidean and Stochastic. You get eight voices of polyphony and 128 patterns per track, an LFO and envelope per track, real-time parameter recording and MPE compatibility. And when it comes to modulation, you can draw automation, LFO shapes and envelopes on the button grid.

DAW control features, meanwhile, include the option to trigger loops and clips, adjust mixer and instrument settings and arrange clips. A dedicated plugin enables you to sync and control Reliq from your DAW, too.

Naturally, there's plenty of I/O: three MIDI Outs, one MIDI In, USB-C MIDI, USB Host, 16 x gate and 32 x CV, reset out and clock out. The CV/gate connectivity and 16x16 matrix I/O comes in its own Eurorack-compatible case; this can be powered from the main Reliq unit via USB-C or a Eurorack power supply.

It's hard to know what to make of Reliq without seeing it in action. There are no videos to watch at this stage, but you can sign up for a launch invite on the website and receive a discount. The standard price will be $1,699.



MODALICS EON-ARP IS A FREE PLUGIN FOR CREATING WILD MELODY AND CHORD PATTERNS

Modalics' first plugin, Beat Scholar, put a new spin on the beatmaking plugin concept, and was notable for its sliceable 'beat pizzas'. The follow-up, EON-Arp, focuses on the creation of melodic and harmonic patterns, and the pleasing news is that you can currently download it for free.

At its heart, and as its name implies, EON-Arp is an arpeggiator, but it's one that promises a large amount of rhythmic and melodic control. The note grid is completely customisable: you can adjust the position, length or velocity of every note with either quantised or freeform timing. As such, everything from finely-honed grooves to experimental polyrhythms should be within your grasp.

Up to 128 steps and 11 pitch positions are available to you, and as well as being able to trigger your existing synths, EON-Arp also has its own built-in mini wavetable synth. As such, it can be viewed as a completely self-contained melody and chord pattern generator.

The plugin enables you to take up to eight snapshots, and you can switch between them with quantized triggering using keyswitches. More than 100 chord, progression and scale presets are included to get you started.

EON-Arp runs on PC and Mac in VST/AU/AAX formats and can be downloaded for free from the Modalics website. A licensed version allowing for three activations on different computers can be purchased for $29.

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MAKE A TRACK WITH TRACKTION WAVEFORM FREE 12

Looking to try a new DAW or switch up your workflow? Waveform offers an inspiring tool set, and you can get going for free...

At Electronic Musician we love to bring you the best in free production tools. We've covered various free plugins in these pages in the past, but this issue we're focusing on one specific freebie – a fully equipped DAW with all the tools you need to create a fully finished track.

Waveform Free 12 is Tracktion's impressively equipped and upgradable free DAW. It has an awesome feature set that includes excellent onboard effects, instruments, utility plugins and content, plus its flexible new browser makes finding stuff a cinch. It's cross-platform friendly (OS X, Windows and Linux) and also supports VST, VST 3 and AU plugin formats, so you can integrate your favorite third-party plugins.

Unlike some free DAWs it has no track count, saving or exporting limitations, and the included content is completely copyright free, so you can use the music you produce without restrictions.

What's more, if you really like what you see and want to upgrade but aren't ready for the full Pro edition, there are now three paid-for feature expansions: Recording Engineer, MIDI Producer and Synth Pack.

Given that you're reading this magazine, it's likely you already have access to at least one DAW in some form – so why would you need a free one? Much like say, Bitwig Studio, Ableton Live or FL Studio, Waveform brings it's own unique workflow and distinctive toolset that functions a little differently from some more traditional DAWs. Like with those other applications, this means it can offer a nice route to switching up your workflow and trying out some new ideas. And if it doesn't stick... Well, you've not spent a dime! If you do want to take things to the next level, head over to www.tracktion.com where you'll find sound packs, instruments and of course the flagship Waveform Pro 12.

BROWSER PANEL
Use this as a tabbed panel or open multiple tabs as panes

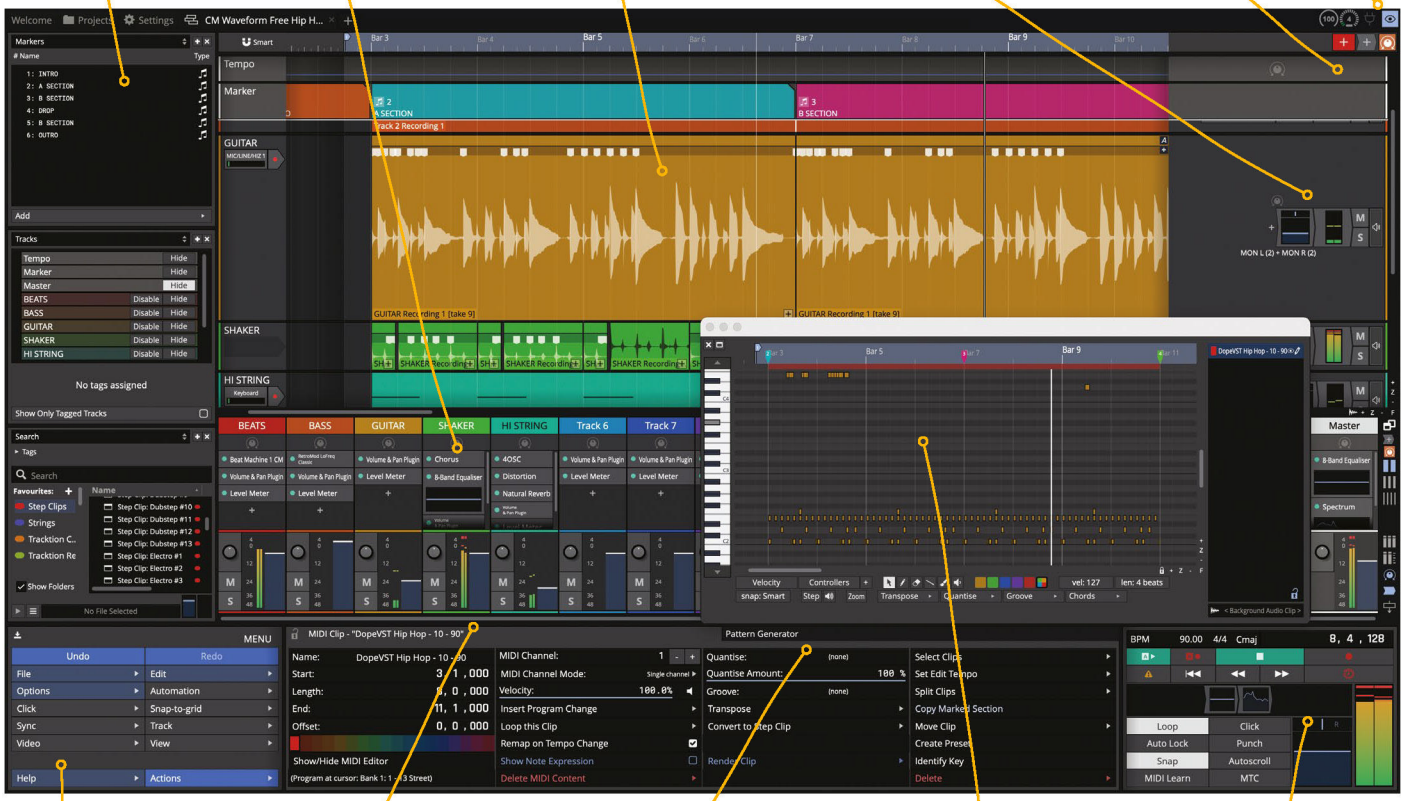
MIXER PANEL
Open the main Mixer Panel for a traditional mixer layout

WARP EDITING
Use the FX icon to activate clip-based warp time editing

INLINE MIXER
View and modify Waveform's track-based inline modular rack environment

CREATE
Drag and drop these three key icons to create plugins, clips and modifiers

EYE
Click on this icon to open and close the workspace panels selector



MENU
You'll find Waveform's main menu at the bottom left-hand side of the Controls Panel

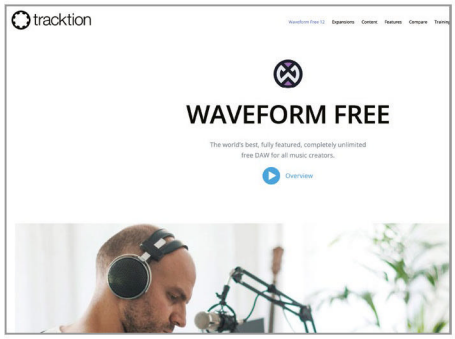
CLIP PARAMETERS
View and edit clip parameters from the Controls Panel

PATTERN GENERATOR
Use the pattern generator for arpeggios, chord progressions and basslines

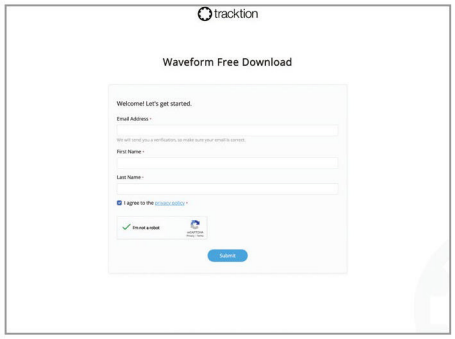
MIDI EDITING
MIDI can edit directly in the Arrange panel or in the MIDI Editor panel , which can also be undocked as you wish

TRANSPORT AND MASTER SECTION
Control key transport features and edit the master output filter chain

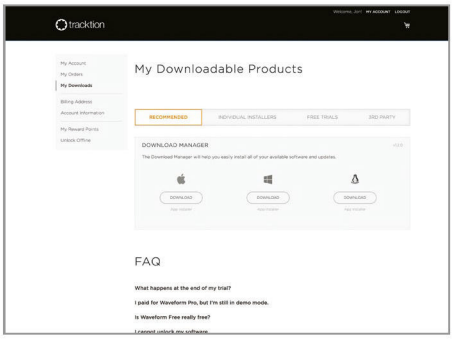
Step by step 1. Install and activate



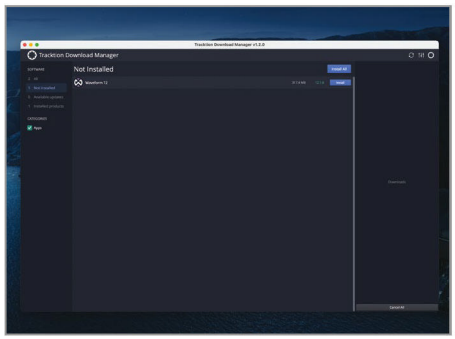
01 Waveform Free is a feature rich but lite version of Tracktion's flagship Waveform Pro, and it can be freely accessed from Tracktion's website. To get started head to www.tracktion.com/products/waveform-free and click on the Free Download tab.



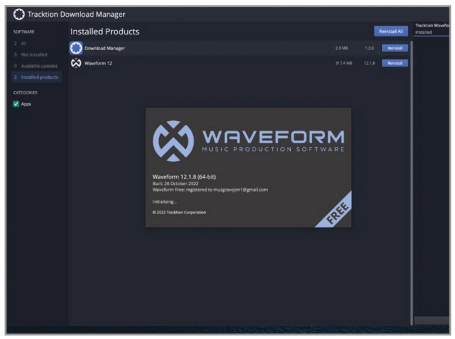
02 Here you simply provide your name and email address, and once submitted they'll send a confirmation email. In the email, click on the enclosed link and then continue to set up your account from there.



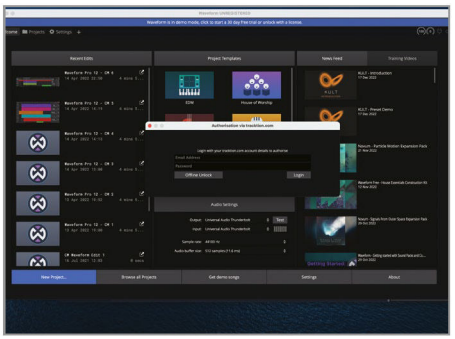
03 Next, log in to your account and head to the My Downloadable Products page. Here you should see a tab of individual installers including Waveform 12. However we suggest you grab the Download Manager application. Choose the required platform (Windows, OS X and Linux), download and run the installer.



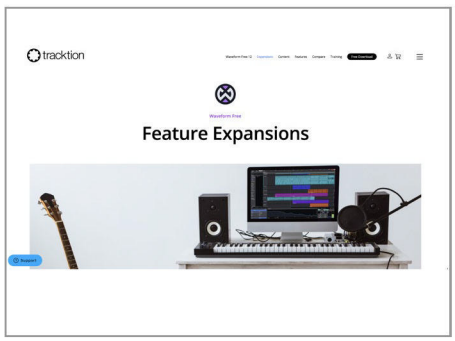
04 Launch the Download Manager. This will ask you to log into the Tracktion account that you set up in Step 2, and you'll then see your available products, including the Waveform 12 application. Select 'Install' and the manager will download and install Waveform 12.



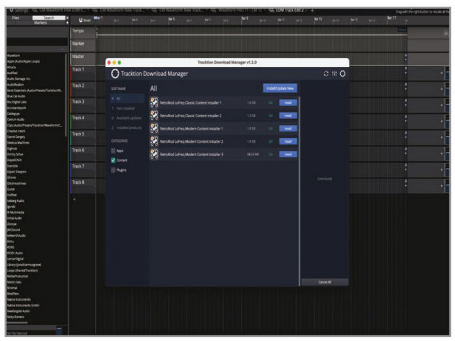
05 Now launch the Waveform 12 application. You should see the Waveform 12 splash screen with the Free banner and your account registration information. On the first launch you'll also need to accept the end user licence agreement. After this you'll find yourself in the Welcome page.



06 Waveform Free 12 should automatically authorize, but if it doesn't, select the About tab on the Welcome screen, choose unlock and log into your account. You can also open the Licensing tab on the Settings page to view and refresh any of your licences.



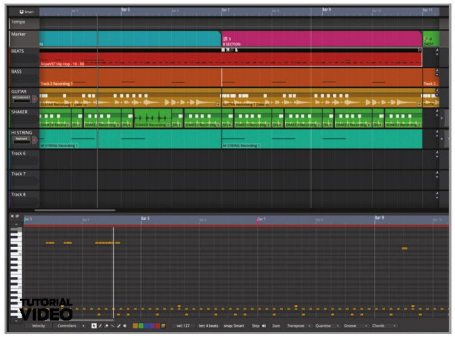
07 If you're interested in expanding Waveform Free's capabilities right off the bat, the Tracktion website has a host of Expansions (see right) and standalone plugins to browse and explore – many of which offer free trials.



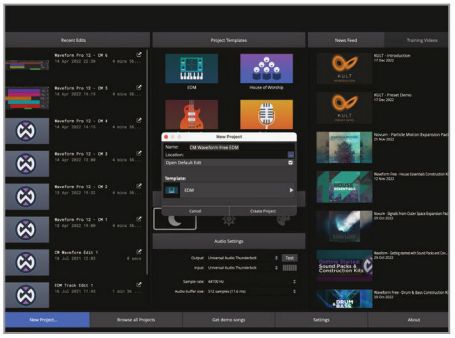
08 If you have authorized any additional content, launch the Downloads Manager app and you should find your synth or content listed. There will be one plugin to install and two content bundles. Once completed, you can also check within Waveform's settings page that any plugin or samples are installed.

Expansions

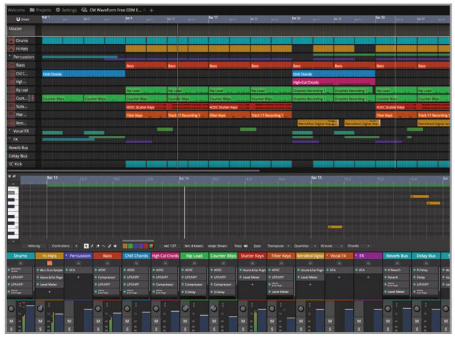
Waveform Pro 12 is the upgrade from the Waveform Free 12 version discussed here, and there's a generous 90-day free trial. However, Tracktion also offer three targeted expansion packs for Waveform Free 12. Recording Engineer ($50) expands the recording, editing and mixing options with tools like edit groups, strip silence and track snapshots. MIDI Producer ($50) focuses on creative tools with enhanced step clip features and advanced MIDI such as event list, knife tool, drum grid and fold. Finally Synth Pack ($30) adds all the Pro synths – Subtractive, Bass OSC, Multi Sampler and Drum Sampler.



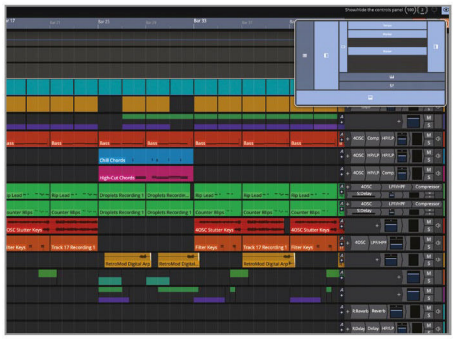
01 Waveform is very easy to use, but like all DAWs has its own specific approach to certain aspects. Over the next few pages let's familiarize ourselves with the interface and look at the basics of setting up projects, edits, programming, recording, editing and mixing.



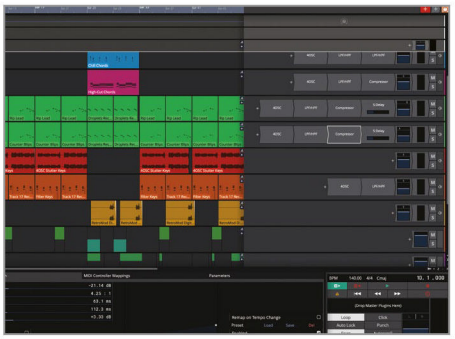
02 Waveform Free includes a bunch of task-specific project templates with preassigned tracks and demo parts. If you've never used Waveform before and want to familiarize yourself with the features, these are an excellent place to start. You'll find them at the top center of the Welcome screen. Here we've used the EDM template.



03 With your new project created and saved, you should now have a fresh Edit open in a new tab at the top of the screen. Any additional Edits saved within the Project creates further tabs, allowing easy switching between them. Use the neighboring tabs to return to the Welcome screen or Projects list.

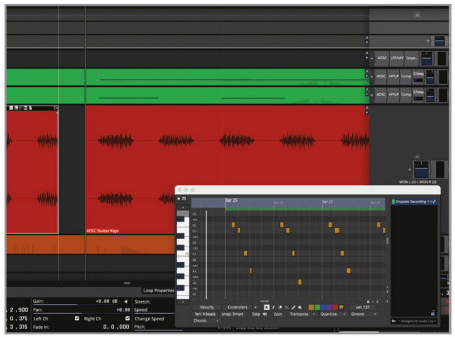


04 Waveform's workspace is centered around the Arrange area and this is flanked by various further foldaway panels. For an overview of available panels and to switch between them, use the Eye icon in the top right corner to reveal the panel selector.

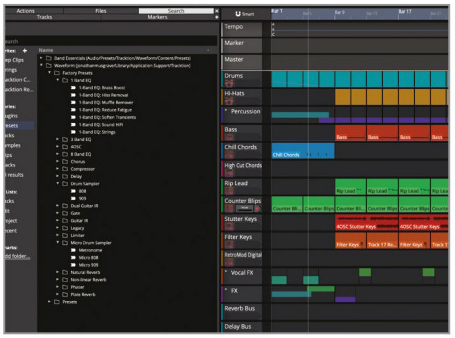


05 Waveform's overall layout looks reasonably familiar but does have some interesting aspects, such as the Inline Mixer on the right hand side. This is a key component of Waveform, and uses a very flexible modular approach to processing. Between the Arrange panel and Inline Mixer is a divide line. Drag this to the left to reveal all components.

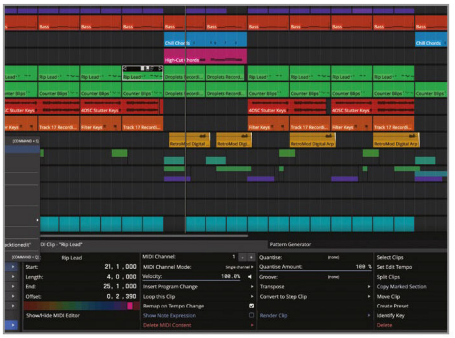
06 You'll see chains of modules. The arrow-like shape of the blocks indicates the signal flow direction. Many of these are labeled and if you click on one, Compressor for example, the corresponding processing window opens for editing. To add more plugins, drag and drop the grey plugin icon from the top right corner into the Inline mixer.



07 Editing in Waveform works in two ways. Both MIDI and audio clips can be edited directly in the Arrange area, and zooming right in reveals the features. Meanwhile MIDI clips can also be edited using the MIDI Editor panel just below the Arrange panel, which you can also undock.

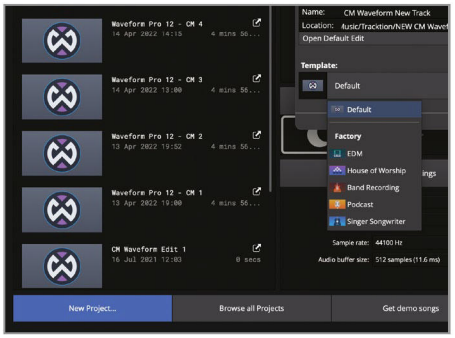


08 On the left of the Arrange area is the Browser, which can be opened via the View menu or from the Eye panel. It also includes a handy cursor-sensitive auto hide option. The tabbed Browser allows you to browse and search files and activate/hide tracks.

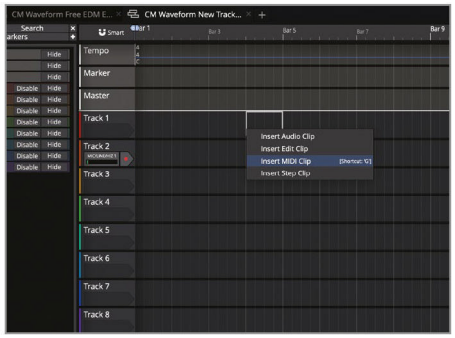


09 Finally, if you're looking for menu options including file saving, editing, new track creation or Waveform's many Action macro commands, you'll find these in the Controls Panel at the bottom – use the little arrow icon at the bottom left or Eye panel selector. The panel also includes inspector-style parameter details for the currently selected clip or plugin.

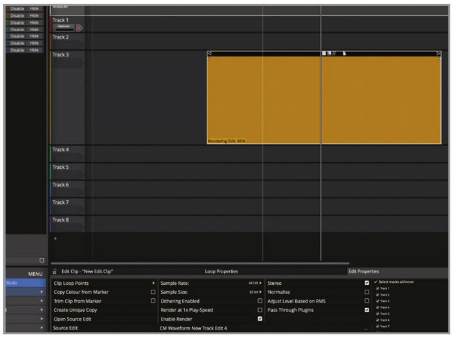
Step by step 3. Projects, clips and editing



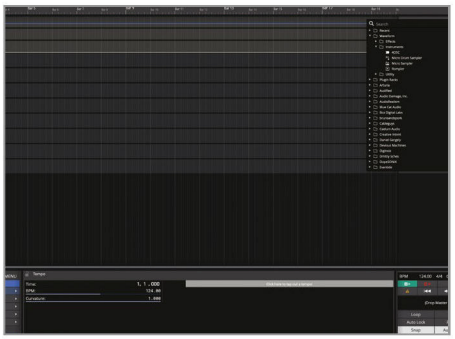
01 Click the New Project tab at the bottom left. This time, choose the Default template from the drop-down menu and select the Create Project tab.



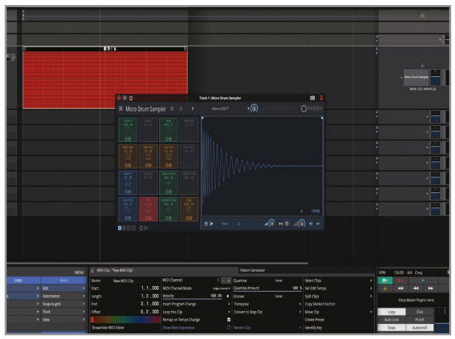
02 The default Edit has eight tracks. Unlike many DAWs, tracks are not function-specific, so they will become whatever you add to them or record in them. To add a blank clip without recording drag the red plus icon onto a track. It will give you a choice of clip types – Audio, MIDI, Step and Edit.



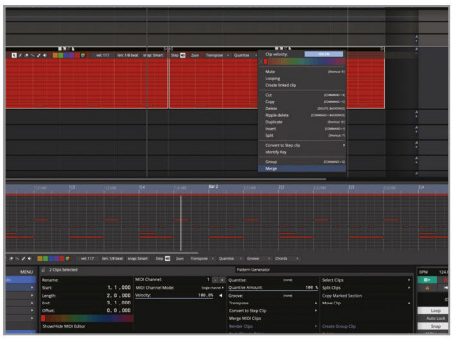
03 The first three of those clip types are pretty standard. Edit, meanwhile, is something that's rather unique to Waveform. It allows you to embed into the arrange area other Edits from the same Project. It renders them as audio and you'll see in the details panel at the bottom a corresponding tab for Edit Properties.



04 Now let's add a couple of parts. In the properties section at the bottom, click on the Tempo and use the slider to adjust it. We've gone for 124bpm. First we're going to add a beat. Grab the grey plus plugin object in the top right and drag it onto Track 1.

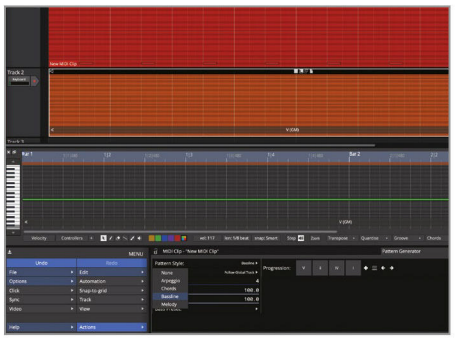


05 From the Waveform Instruments menu choose the Micro Drum Sampler. Select the Micro 909 preset and create a MIDI clip using the red plus icon. In the TimeBar at the top of the Arrange area, drag the blue markers to create loop points at Bar 1 and Bar 2. Select looped playback in the transport section.

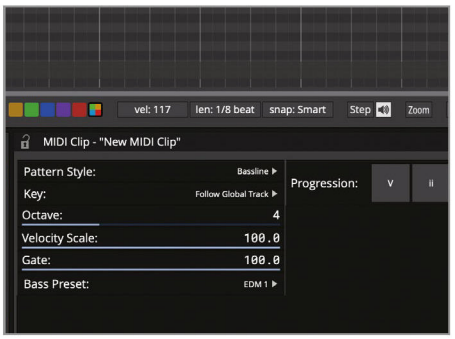


06 Double click the MIDI clip to open the MIDI Editor, and at the bottom set the required note length. Grab the pencil tool to draw in some notes. From the Groove menu add some swing. In the Arrange area, right click on the clip and select Duplicate. Then select both clips and from the right click menu select Merge.

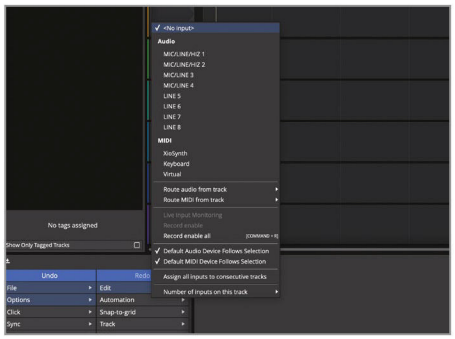
07 Now let's add a bass part. Drag the plugin object onto Track 2 and add the 4OSC synth from the Waveform Instruments folder. Pick a bass sound – we've chosen Pick Bass WMF. Now create a blank MIDI clip using the red plugin icon.



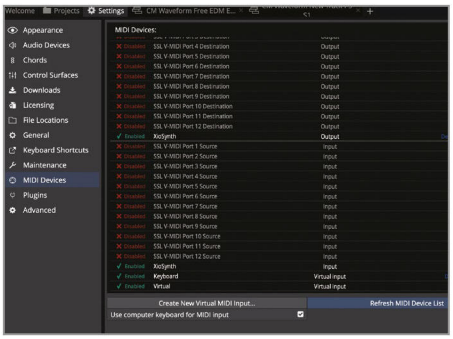
08 Rather than draw in a part, why not try the excellent Pattern Generator? With the MIDI clip selected, head to the Properties panel at the bottom and select the Pattern Generator tab. Choose the drop-down Pattern Style option and select Bassline. With this open, you can select a progression preset or create your own using the progression blocks.



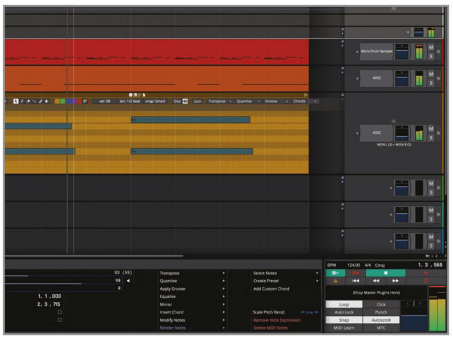
09 Finally, choose a pattern from the Bass Preset menu – we've chosen EDM 1. You can further adjust the overall octave, velocity, scale and gate time for the MIDI part and of course set a different scale if required. And you might decide, once the pattern is up, that you want a different chord progression.



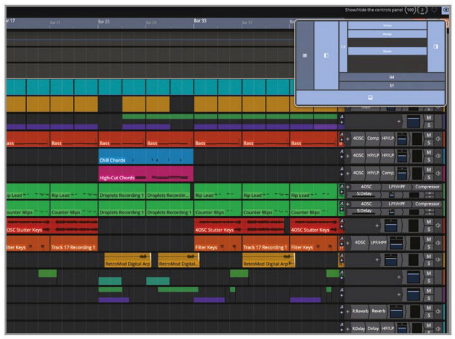
01 Recording MIDI or audio in Waveform Free is straightforward. You have no track limits to worry about and input choice defines the track type. Click the input selector at the left-hand end of a track. This shows your available MIDI and audio inputs. If they're not available there, double-check the Audio and MIDI Devices tabs in Settings.



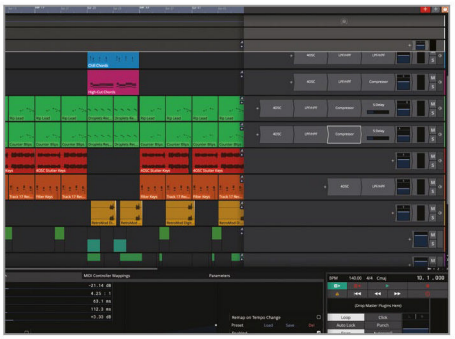
02 In MIDI settings you can also activate the computer keyboard for MIDI input. This is what we've done. Now with Caps Lock active and the MIDI Virtual input selected, we can use the computer keyboard for MIDI input, using Z/X for octave selection, and C/V for velocity.



03 To start recording, simply activate the red track arm button next to the input selector and hit record in the transport section or keystroke 'R'. Here we've loaded up an instance of 4OSC, chosen a pad preset and recorded in a keys part.

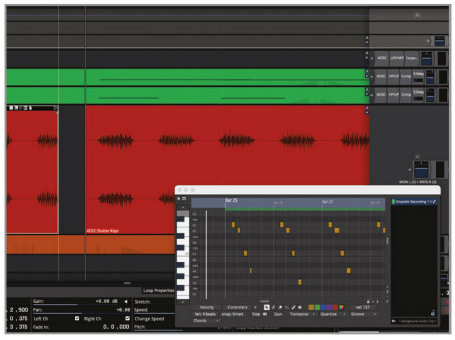


04 To record audio we simply select an interface input. Note that you can also record MIDI and audio from existing tracks, simply by selecting the Route from track options in the input selector. We've selected the Hi Z input, ready to record a guitar DI. Check out the Properties Panel at the bottom, for options including digital gain or threshold-dependent recording.

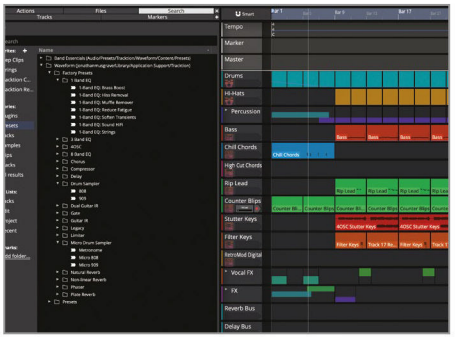


05 With everything set up, you can simply arm the track and hit record. However, if we set up loop points and activate Loop – we've gone for a four-bar section – we can record multiple takes. When you hit stop, click on the plus icon in the bottom right of the clip to see a list of takes.

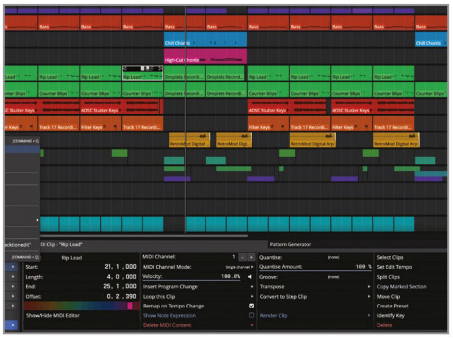
06 For quick comp editing, select the Show Takes option. This folds open all the takes into lanes below. You then simply use the cursor to highlight the sections you want. Once happy, you can simply Hide the takes again, which leaves the option to return to the comp later.



07 Waveform includes a powerful and easy to use integrated modulation system. To get started, drag the orange Track Modifier object in the top right onto the plugin you want to control and select the LFO button. From the parameter list, choose a target parameter. Here we've simply selected the Pan in the Volume and Pan plugin.



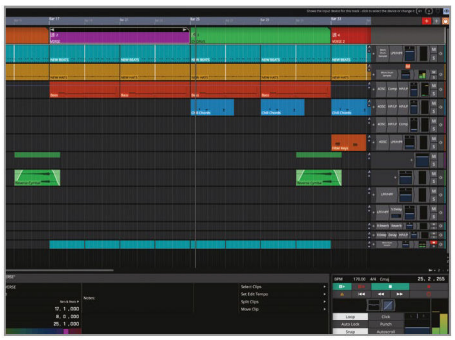
08 You'll now see a small red animated icon in the Inline mixer. Click on this and it opens the modulation parameters in the bottom Controls Panel. Here the LFO Modifier tab includes speed, shape and depth options as well as a visual representation of the LFO.



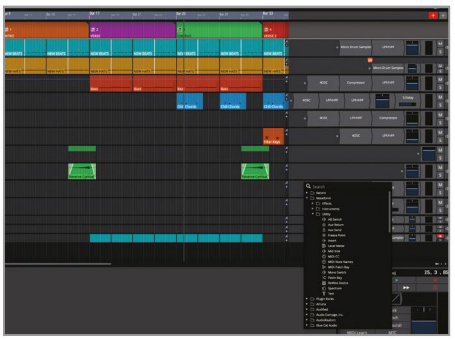
09 In conjunction with setting up your LFO, you can use the Assignments panel to view and edit the specific target parameter depth and offset. Also, try dragging the red animated icon from the Inline Mixer onto another plugin. This allows you to control multiple targets from one modifier. To demonstrate here, we've added the Volume.

Step by step 5. Mixing, mastering and exporting

01 Mixing, mastering and exporting are the final stages of a production and they're all well supported in Waveform Free 12. As you move towards mixing your track, there are plenty of features to help you get organized. The Marker Track, for example, is available from the Eye panel or the Global Tracks part of the View menu.



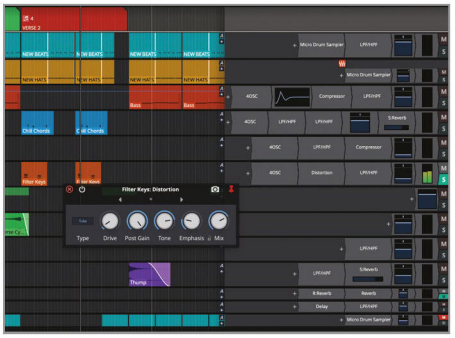
02 Drag the clip object in the top right to the desired position and choose the bar and beats option. Just like clips, markers can be resized, named, copied, colored and so on. They are also numbered and simply by typing the number and hitting enter you can quickly jump directly to your desired section.



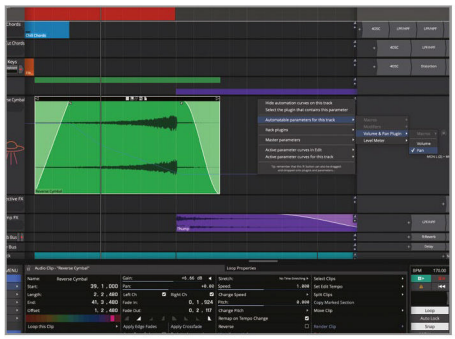
03 You may also want auxiliaries for reverbs and delays. You need to create these from scratch but it's very easy. Use the grey plugin object to add Aux Sends to the Inline Mixer before or after the Volume plugin. Then create new tracks for each of your effects returns, adding an Aux Return plugin followed by your effect.

04 You can adjust send levels directly from the Inline Mixer plugins. Meanwhile, clicking on the send and return plugins reveals their respective parameters at the bottom. Here you can name busses and also change the bus assignments. Finally, right click on the track solo button for the return track to reveal the solo isolate option.

05 When it comes to processing, Waveform Free has a good choice of plugins. There is some duplication (there are multiple EQs for example). Even so, the 8-band EQ with resizable window, integrated frequency analyser and stereo, dual mono and mid/sides processing is particularly good. Here we've loaded up an instance using its Phat Low preset.

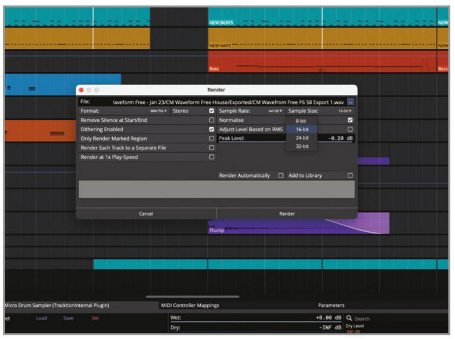


06 For dynamics processing you have a simple but reliable Compressor plugin. This includes a graphic display for setting threshold and ratio and also includes an external side chain. Meanwhile for flavor there's an excellent distortion plugin with six modes. Here we've loaded the Tube preset on our filter synth.



07 Now let's add automation. Select the 'default automation for each track' option from Menu/Automation. Then use the A icon on each track to view the active parameter curves and add further automatable parameters. Click on the curve to create and adjust nodes and make sure the green A play icon is active in the transport.

08 To add master effects we use the master output filter chain just below the transport in the controls panel. Drag the grey plugin icon to this area or right click it to launch the plugin selector window. Here we've loaded a typical mix bus chain of EQ, compressor and limiter, all from Waveform Free's stock plugins.



09 With your mix complete it's time to render the output. This option is in the File menu, Export: Render to file. The dialog includes many settings including a good choice of file formats, sample rates and bit depths. Meanwhile, for project sharing you can actually render all of the tracks individually.

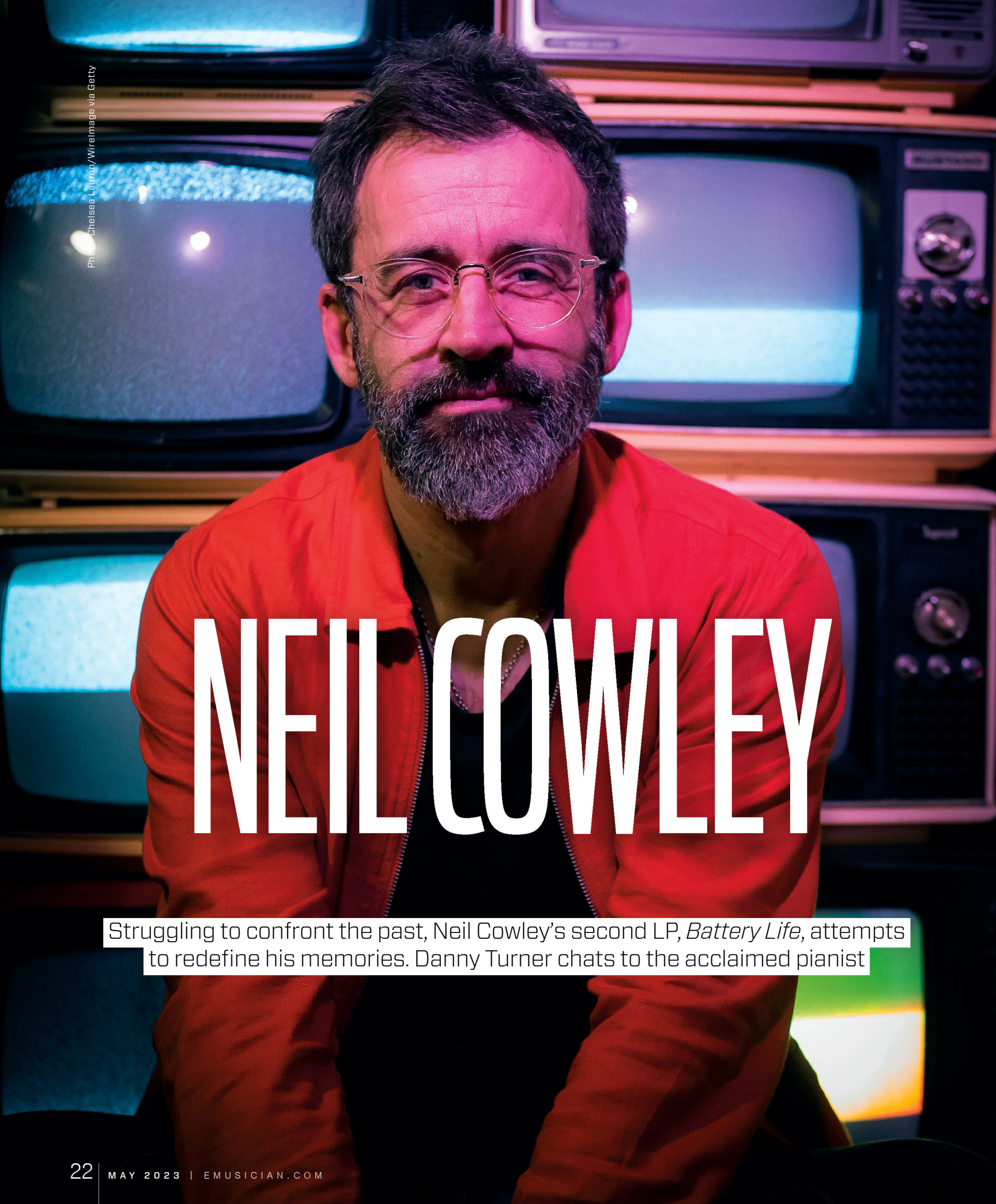


Photo: Chelsea Lauren/WireImage via Getty

NEIL COWLEY

Struggling to confront the past, Neil Cowley's second LP, *Battery Life*, attempts to redefine his memories. Danny Turner chats to the acclaimed pianist

With his skills as a keyboardist in heavy demand, classically trained pianist Neil Cowley began his career as a session musician working with bands such as The Brand New Heavies and solo pop idols Emeli Sandé and Adele. With his own band, the Neil Cowley Trio, the critically lauded composer has straddled the pop, jazz and experimental genres with ease, releasing a host of albums concluding with the jazz instrumental masterpiece *Spacebound Apes* in 2016.

Not far shy of his 50th birthday, Cowley pivoted towards working on a solo project, releasing the more electronic-focused LP *Hall of Mirrors*. Enlivened by a renewed sense of self-expression, he returns two years later with the soothing brilliance of the electro-acoustic *Battery Life* – an album that examines the positive/negative balance of abstract memories; memories that were often too painful for Cowley to face.

The piano is obviously integral to your creative output. What is it about the instrument that has you hooked?

I was the definitive classically trained piano kid. My father used to have parties at our house and installed a little Zender upright piano. By the age of five or six I was making little tunes and eventually went to see this dear old lady who would give me marks out of ten every week before professing to my mother that this boy's got talent. Then a very kind man who used to play hymns in assembly plucked me out and said, 'We'll train this boy and get him into the Royal Academy'. I think I was a bit of a social experiment because when I got there everyone was super upper class and all seemed to know each other. I kind of hated it but just by chance I joined a Blues Brothers covers band when I was 14 and that changed my life. From that moment, I taught myself everything about contemporary music and piano and was hooked.

In terms of sustaining it, I don't sustain a love for it through thick and thin – there are huge swathes of time where I loathe everything about it, but that's normally when I loathe everything about myself. The piano is integral to me and a reflection of who I am and how I feel about myself more than any other item in my life, so when I'm in love with myself I'm in love with the instrument.

Didn't you get into programming at that point too?

I used to get these little ZX Spectrum magazines where you could manually type in code. There would be five or six pages of endless script and you'd get three quarters of the way in and the computer would overheat and crash. I don't remember anything ever happening as a result of spending nine hours doing it, I suppose it epitomized how lagging I was in terms of technology. Because the piano was my main source for music, it took me years to work out you could do cool things with electronics. Eventually, I did two paper rounds, saved every day and got myself a clunky old digital Yamaha DX7, which gave me a portable piano to play with in the soul band. There were also books where you could programme stuff into the DX7 and save it onto a ROM, but I had no idea what I was doing with that either.

Did you try your hand at solo recordings prior to becoming a session musician in your late teens?

Someone lent me a 4-track machine once and I've got some cassette tapes withering away in lofts, but as a teenager my goal was just to find a gateway out of my social situation. The way to do that was to just get out there, see the world and make a living by playing with other people in bands. I answered a Melody Maker advert for a keyboard player for a 'chart band', which happened to be The Pasadenas, who were five guys from London who were kind of like The Temptations. Every keyboard player in London seemed to audition for it but I somehow got the gig, which was enough to get me into a session agency called Session Connection. The first audition they got me was with Marcella Detroit from Shakespears Sister. That didn't work out, but the second one was with The Brand New Heavies – a band that I'd been to see and loved. I got that gig!

Can you take us through the process of contributing to Adele's first two albums, *19* and *21*?

At that point I'd turned my back on session work because I'd started the Neil Cowley Trio and was spending all my time doing that. Then an old friend of mine who was managing a producer called Jim Abbiss rang me to say she had this act who was only 17 and it was her first time in the studio but her keyboard player left because he didn't think it was going anywhere. I turned up to find Adele and we set up either side of the room and did 'Hometown Glory' in two takes. All the other stuff was overdubbed at a later date and I repeated that process for the second album, *21*.

The environment around the second album must have felt very different?

Thinking back, the Adele phenomenon still hadn't quite kicked in yet. *19* had done very well but it was only after *21* came out that everything went ballistic. I did 'Rolling In The Deep' with Paul Epworth on that one, which was a slightly different process. Basically, I did three afternoon's work and spent the next ten years listening to myself in supermarkets.

Having contributed to such seminal albums, does that leave you with a feeling that goes beyond it being just a 'job'?
The process is quite liberating because you don't have to attach parts of your soul to it – the irony being that those few afternoons left a massive imprint on the world whereas I pain over my own stuff, which means so much more to me but doesn't have the same outcome. The Adele stuff cuts a conversation dead at dinner parties when you don't know what to say about yourself, but although I'm disconnected from it I suppose there is some pride in the gravitas of how iconic it's become.

Have you found that working solo is a freeing experience or is it more creatively challenging having to start from a blank page with no one to feed off?
It's hideous at first. All those safety blankets are no longer there so you feel very exposed. That was what made *Hall of Mirrors* and my latest album, *Battery Life*, the most personal, intimate and open records that I've ever made.

You mention *Battery Life* being a record of 'abstract memories and stolen excerpts'. That's quite an abstract description in itself...
It all spawned from reflecting on my mother's diaries. She died in 2010 after a very long illness and left me a big pile of diaries that she used to write year-on-year. I didn't have the courage to read them, mostly because I had to nurse her psychologically through the last ten years of her life fighting this horrible illness called fibrosing alveolitis. Whilst I did everything I could, I was scared that I might read that she was disappointed in my performance in some way, so I was being a coward and denying myself that, just in case there was a stab in there. It made me reflect on what an archive or a memory is and how I would view what my mother documented in a very detailed way and the emotions that would unearth.

"Genesis had a clearout of their studio... I was fourth or fifth to pillage but I still managed to grab a load of their stuff"

Because it's not from the most private parts of my heart, I can objectively say I'm very good at playing piano on a pop ballad because I have everything I need technically, my ear's really good and I understand how to complement a voice. It comes from a part of my brain I'm not shy of, but that confidence goes to shit when it comes to working on my own things.

Does that lack of confidence explain why you didn't record your debut solo album *Hall of Mirrors* until a few years ago?
I loved the human interaction of playing in the Neil Cowley Trio and was conceited enough to stick my name all over that because it was my compositions and very much my creations, but you're right that I didn't make a solo record until quite late.

We're sitting here now in front of these TVs that I'm able to play with my piano. In a way they're like pseudo band members; I can interact and make them do things that feed back to me. That's the advantage and joy of being in band – there's always someone to trigger an idea or raise your energy, but being a solo artist is a lot more difficult, particularly live.

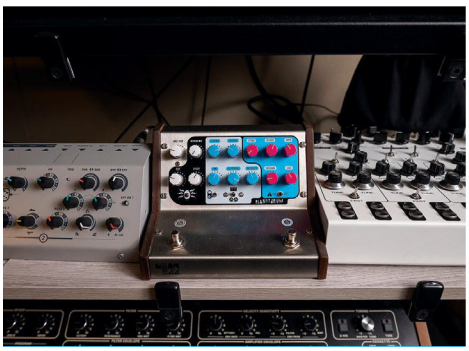
Do you think that how we archive memories often misrepresents them?
We record every single moment of our lives on our phones and devices, but is that as powerful as what we selectively remember and are those abstract memories actually more powerful, romantic or suggestive? Why do we have to document everything in such detail instead of just living to remember what we remember? The ultimate example of that is being at an amazing event and filming the whole thing through a phone where you miss everything just to tick a box saying that you were there.

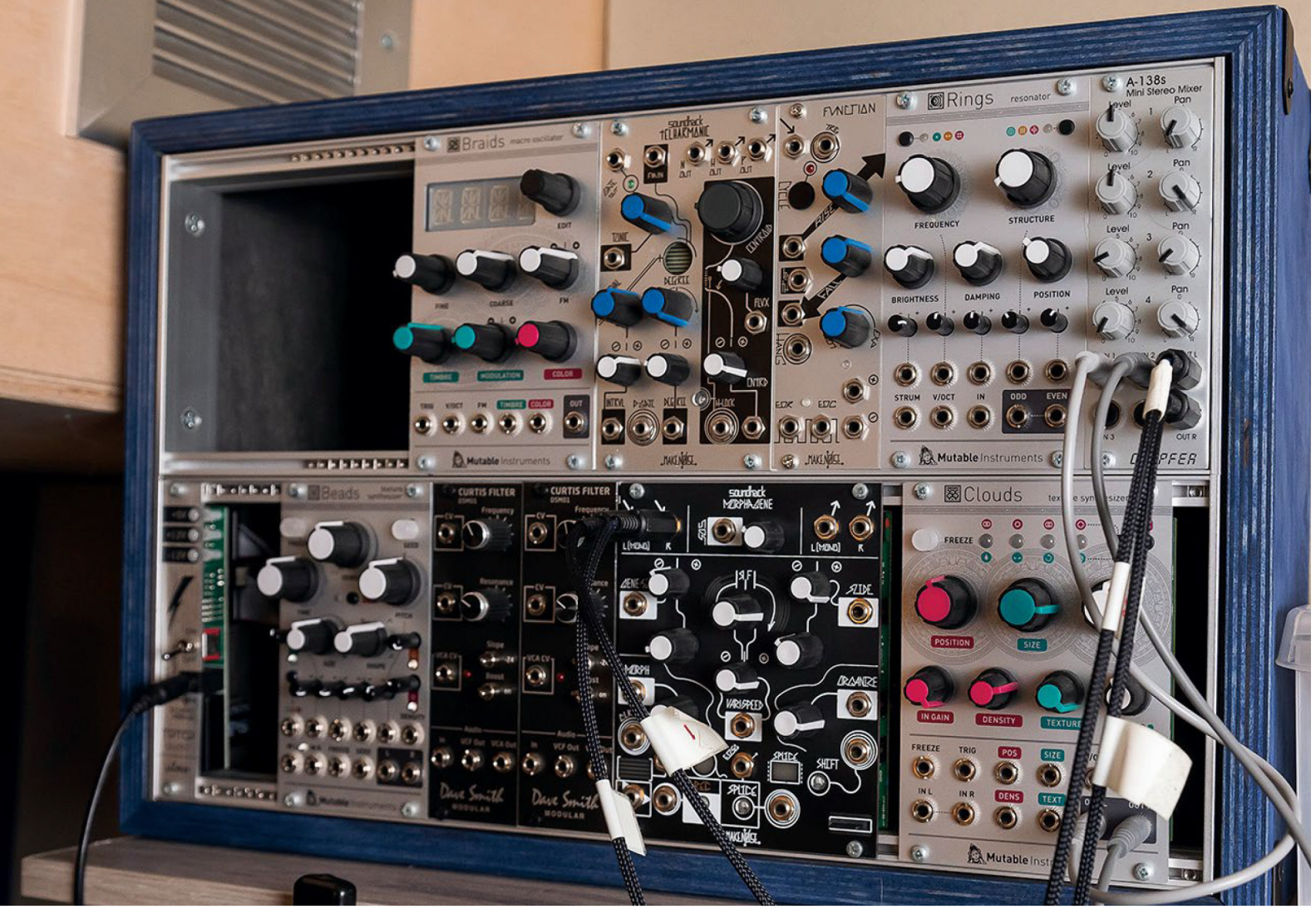
Typically, when you look back at the footage it feels disassociated.
There's nothing there – no soul or emotion. I reflected on that a lot and actually did a little second album for the CD version of *Battery Life*. I didn't listen to the record for three or four months after I finished it then took a few select stems, played them through the Mac and created entirely new tracks based on those few memory triggers, experimenting and reflecting on whatever my brain had retained.

Once you had a concept for *Battery Life*, how did you begin to unlock those emotional themes in practical terms?
The piano does that for me anyway. To be absolutely honest, it's not as convoluted as thinking about what I did on a particular day in 2006. I'll create some work and tend to posthumously process what I was thinking about or what was playing on my mind at the time. Playing piano is an abstract process which is more in touch with my subconscious than I am consciously. In that sense, I'm behind my own brain.

Some days you sit down and memories are just there, other times you have to use that dirty word 'practice'. You practise for an hour and suddenly you connect with something and have shitloads of ideas. On other days, I'll drive an hour to get to the studio, realize nothing's there and go home again – and that's tough.

Was there a clear point in your composing career where you felt it was time for you to explore beyond various classical or contemporary influences, and discover your own unique voice?





There is a voice of my own and I have pondered on what that is – it's having eclectic musical tastes and someone who was fundamentally taught how to play classical music and eventually conjured up a love for it.

Perhaps controversially at this point, I've always been fascinated by the more Russian-tinged Eastern bloc classical stuff like Shostakovich, but my father was a jazz-pianist, my mother was obsessed by jazz, and soul music was my personal little place.

The lyricism of soul and jazz and the technical harmonic know-how of classical is the mish mash that I am, but on reflection everything I've done is part of the same body of work. All I'm doing is using different tools and flavors to plunder different angles.

How do you prevent your use of piano from becoming habitual?

There are days when I ponder that very question: 'I know your licks, Cowley – come on, do something different!'. I suppose that I have faith that my chords and phrases are me and that I have enough breadth of language to express myself through them.

How you stop it becoming habitual is a good question. Listen to others, I suppose. Listening to things that stretch the mind, working them out, copying them and making them your own is one technique to getting through that. My Achilles heel is that I see a new piece of gear, buy it and ten minutes later I'm bored of it. Inevitably, I realize that I was fine where I was with the instrument that I love and know the most, but maybe I needed to go around all of those circuits to get there.

When did you move into Metropolis Studios and what made it such a good choice for you?

I had a studio at the end of my garden for ten years but contrary to everyone else's experience, decided that I needed an hour's commute to get my head together. I approached the previous MD around 2018, looking for a space, and he said they would build some studios in the basement. A deposit was given but a year later not a single brick had been laid, although they eventually created this lovely big room at a very kind price to compensate me. Now I can't leave – it's the cosiest, friendliest room in the building and it's got all my vintage keys.

"I use Mutable Instruments' Clouds to change the pitch and ram things up an octave; it all sounds so granular, lovely and juicy"

Do you tend to bump into a lot of other artists there?
Last week The Rolling Stones were in with Elton John and Bill Wyman was even back in the fold. The Foo Fighters turned the whole place into a rehearsal space for their Wembley Stadium gig, so Queen, Black Sabbath, Paul McCartney and Stewart Copeland were all in. Although there are parts of the industry I like to keep at arm's length, it's still nice to see them in the cafeteria.

You mentioned having an addiction to new gear. How has that manifested?
I wish I knew my limit, I just keep going and going and now I've got a lock up to keep certain stuff. The band Genesis had a clearout of their studio, which happened to be in the village where I live. I was fourth or fifth on the list to pillage what they were selling but I still managed to grab a load of their stuff including a Yamaha CS-80, Prophet T8, a pair of Tannoy speakers and Tony Banks' Fender Rhodes. I filled the room, but now I've decided that space is more valuable than gear because it gives you time to work out exactly what you're doing. The sideshow of this solo album is that I wanted it to have an electronic vein so I bought every piece of electronic equipment I could lay my hands on, yet ultimately ended up at the piano again.

What piano do you use?
It's a Kemble, which I bought as a stop gap 15 years ago. Kemble has a reputation for being a poor man's Yamaha, but I got lucky. The piece of felt that goes across the hammers gives it a beautiful celeste-type quality. Upright pianos are extremely brittle, but when you put the practice pedal on it completely embraces you. Virtually everything I've recorded has been on this piano – it's been so lovely to me. Having said that, Metropolis Studio A does have a big grand piano if I want to use it – sorry Kemble [*laughs*].

What's the attached interface?
It's a Helpinsteel piano senser made by Mr Helpinsteel in Austin, Texas. It's a big magnetic pick up that goes across the board, gives you a very reliable piano sound and avoids any feedback issues because it uses a contact mic. I use it as an interface to plug into a bunch of guitar pedals, which allows the piano to play a million different effects too.

Have you tried expoerimenting with software emulations of piano?
I find the best software emulations of piano tend to be the ones that aren't trying quite so hard to sound like a piano. The Nils Frahm Una Corda is pretty good, but something in my ear gets bored very quickly as there's a finite amount of sounds. With the Kemble, it depends on the room, the mood, the heat and how the hammers hit the strings. The feel of plastic on a wooden bed is analog and gorgeous and embraces your fingers in a completely different way.

Do you supplement the sounds on the album with a lot of software sound design?
The piano is generally the first thing that goes down and then I'll work around that, but 95% of what I use is hardware-driven. My 1973 Minimoog is a mainstay for bass parts and I love the new Dave Smith Prophet '08 and Moog Grandmother. I play with those and stick them through various combinations of effects,

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NEIL'S GO-TO GEAR

NEON EGG PLANETARIUM 2
"Plug a mic or bass drum into it and the whole thing turns into a Jon Hopkins record."

MONTREAL ASSEMBLY COUNT TO 5
"I don't even know if the guy who invented it knows how it works, but it's great for capturing little sound snippets."

MOOG DFAM
"It doesn't have MIDI on it but if I send a MIDI clock to the Kenton Pro Solo I can at least control the DFAM's tempo."

MAKE NOISE 0-COAST
"If I'm really honest, I just throw buttons around until it makes a nice noise, but it's lovely."

SOMA LABORATORY LYRA-8
"One hell of a racket."

YAMAHA CS-80
"I fell in love with it."

TONY BANKS' FENDER RHODES
"Immaculate. I reckon Tony barely touched his over the past 20 years."

PROPHET T8
"I think only 800 of these were made and it's even got the Genesis laminate on the top."

TANNOY SPEAKERS
"Greg Freeman (who mixes my stuff), tells me they take work to sound good but I like that."

POM-PYE COMPRESSOR
"POM in Richmond is brilliant at replicating old Fairchild compressors."

MINIMOOG
"I love it to bits. Mine was restored by Soundgas in Derbyshire, UK."

compressors and EQs, like most people do. I spend a lot time syncing things up because something new happens every day when you do that. There are too many temptations within the digital world to make everything sound perfect and I tend to shy away from that as much as I possibly can.

Presumably, your modular setup helps you obtain some of the more modern-sounding effects that you hear on *Battery Life*?
As mentioned, when I started making *Hall of Mirrors* I decided to investigate every piece of electronic gear available, so I thought I'd do modular as well. Like most people who go for modular I didn't have a clue about all of the CV stuff, but if I can do it anyone can. Mutable Instruments' Clouds has a lovely reverb on it – if I use it to change the pitch and ramp things up an octave it all sounds so granular, lovely and juicy and I'll tend to have that sitting behind what the piano's doing. The Make Noise Morphagene is a sampler that also granulates everything, so I'll use that to add a lot of texture.

We read that you're doing a Pitchblack Playback event in support of the album. What does that entail?
One of the symptoms of the pandemic is that whole swathes of time have disappeared. I heartily agreed to this Pitchblack event thinking I'd be playing live but I'm not. I was quite looking forward to that, but apparently everyone

sits in the dark listening to the album, but that's fine – I'll just have a nice cup of tea.

You're going on a European tour in April. Will you be playing the whole of *Battery Life* or a mixture of tracks from across your career?
I'm aspiring to play *Battery Life,* mixed with bits of *Hall of Mirrors* that have stood the test of time and some of the earlier EPs I've released. I've been rehearsing the set with a much more electronic setup – funnily enough with a digital piano as my fundament, but I'll be surrounding that with all the synth stuff, a little Elektron Digitakt as my sequencer and a grand piano behind me so I can chop and change depending on my mood. My sole aim is to master not having bandmates on stage with me. That's why I have all these TVs and things that randomly happen to emulate that spontaneity. I'm determined to get it over the line, but it's still a mission.

Despite your experience as a player, is playing in front of an audience still scary?
I'm fine performing in front of a few others but playing in front of an audience makes you lose your mind. You spend the first ten minutes hiding from them and then there's a crossroad where you get more into yourself but end up becoming so cocksure you become a pain in the arse. I've been watching a lot of Noël Coward interviews recently about how he dealt with an audience. At one point he was booed badly but his genius way to deal with that was to just stand there and bow continually until they ran out of breath. I admire that level of courage and aspire to it. I can feel what's happening right at the back of the room, but if someone's got a cough they need to be silenced because you need complete control.

Does that control mean limiting the amount of things you take on stage?
I do try to pare things down as much as possible because then I can rely on my fingers and my history. The more technology there is, the more nervous I am that it might fail because I still feel that same level of naivety as someone who's only been doing it for five minutes. ■

EASY GUIDE TO SONGWRITING

Tips for creating melodies

Got some cool chords but need a melody to fit them? Tune in below for some useful tips in the first of a major series on songwriting...

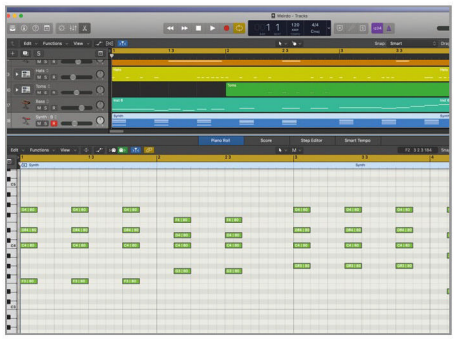
Coming up with a memorable melody is key to writing a decent song, yet this part of the process is often the hardest hurdle to overcome. Melodies can be elusive creatures – sometimes they appear fully-formed when you least expect it, other times you can stare at a blank screen for hours with no ideas.

That's why we're bringing you this regular new series designed to simplify the songwriting process. If you've ever been in the situation described above, you'll be glad to know there are a few tricks you can use to unstick things. Starting with a blank page, here are a few ideas to get the creative juices flowing enough to get a fresh new project off the ground.

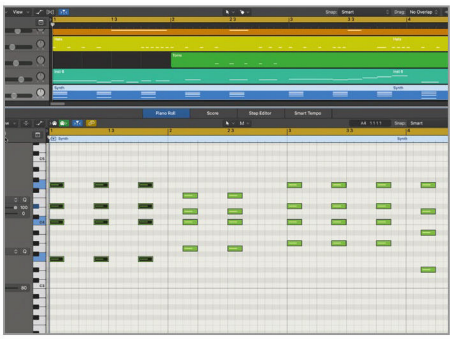
To a large extent, how your melody will end up sounding is dependent on genre – a jazz melody will probably be more complex and challenging to the ear than an out-and-out pop melody. Whatever genre you're writing in, there's no doubting the value of a sprinkling of music theory, and while we don't want to get into too much detail here, knowing what notes to go for and which to avoid when working in a particular key can make all the difference.

Whether it's a vocal or instrumental melody that you're after, following the tips that are shown here can help you to break the deadlock and start to form an idea that could turn into your next great song.

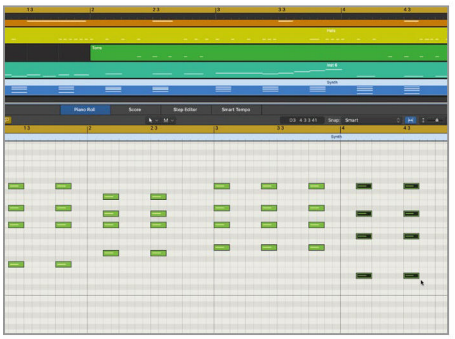
Step by step Writing a melody over a chord progression using 'parent scales'



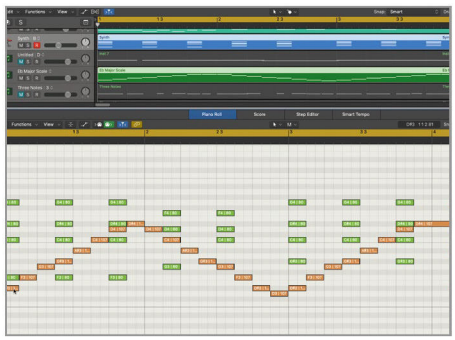
01 A typical scenario is where you might find yourself with a chord progression you like the sound of, but need to come up with a melody to fit over the top. Here's one we prepared earlier. When fitting a melody to an existing progression like this, there are certain notes that you know are going to work – but what are they?



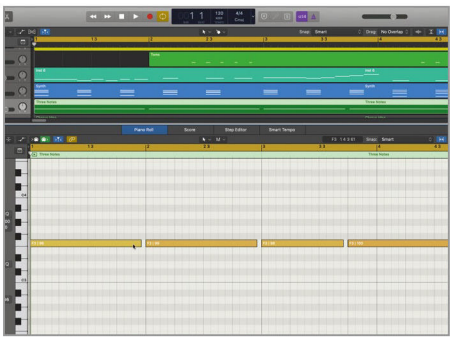
02 The notes we know are going to work come from the 'parent' scale of whatever key our progression is in. So our first job is to work out the key of the song. Using our DAW's chord analyzer, we know our synth part is playing a four-chord progression made up of the following: F7sus2 > G7sus4 > AbMaj7 > EbMaj7.



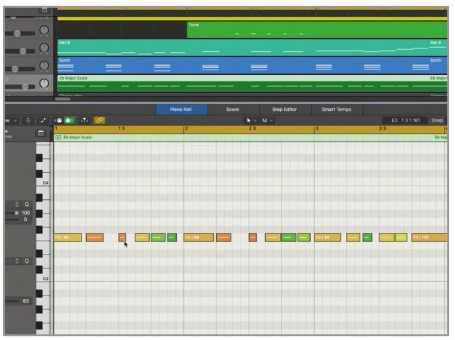
03 Listening to the progression, when we hit that fourth EbMaj7 chord, we get the feeling of having arrived 'home' – if we stayed on that chord, our ears would be pretty happy! So let's assume that Eb is the root note, or 'tonic' of the key, and because the tonic EbMaj7 chord is a major chord, we'll assume we're in Eb major.



04 We can test this out by playing the notes of the Eb major scale (Eb, F, G, Ab, Bb, C, D) over our chords – and it works! So now we know that we can safely use the notes of this scale as a palette for creating a melody that'll work with this progression. Let's get on and start sketching some melody ideas!



05 With seven notes to choose from, the possibilities are endless, so let's start simple and pick one note from the scale – let's go for F, the 2nd note, or 'degree' of the scale, one up from the tonic Eb. Staying on this note introduces an element of tension, as our ears naturally want it to resolve back down to Eb.



06 Holding single notes isn't that interesting though, so let's start adding some rhythmic elements, breaking the long notes up into shorter ones. In this first example, we've played a rhythm in from a keyboard, still sticking to one note, but just feeling where the notes might fall nicely against the beat.

Pro tips

Capture the moment

Spontaneous melodies that spring unbidden from the subconscious often prove to be the best. Luckily, pretty much all of us now carry the equivalent of a dictaphone in our pockets, so keep your phone's Voice Recorder app handy on your home screen for those moments where a genius melody or amazing lyrical idea pops into your head from nowhere. As an example, Apple's iPhone ships with the Voice Memos app, and there are also plenty of third-party alternatives available from the App Store. Record your idea with a timestamp and name the recording so you'll remember it later when sat at your desk, at which point you can use it as the starting point for a fresh track. You may get a few strange looks as you hum or yodel into your phone in the checkout queue at the supermarket, but with any luck the resulting song will be worth the embarrassment!

Inspiration generation

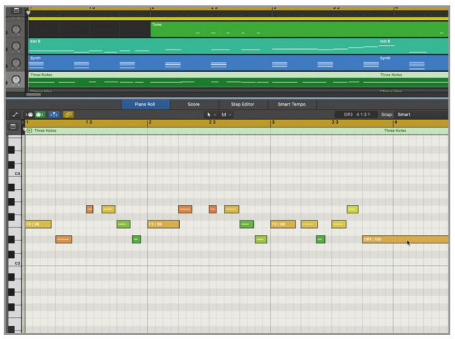
When trying to come up with melody ideas, try using an unfamiliar sound source. New sounds can be very inspiring, so running through a bunch of presets you've never heard before, perhaps on a new synth or even on an old one you don't use very much, can often be enough to set you off down a new avenue of creativity. Our inspiration for these chords came via a preset from Humanoid Sound Systems' Enzyme.

Another approach that works well is to use an unfamiliar instrument. For instance, if you're a keyboard player, try using a grid-based controller (like a Novation Launchpad) set to Note mode – the unfamiliar layout will make you sketch out tunes in a way you wouldn't ordinarily play on a conventional keyboard.

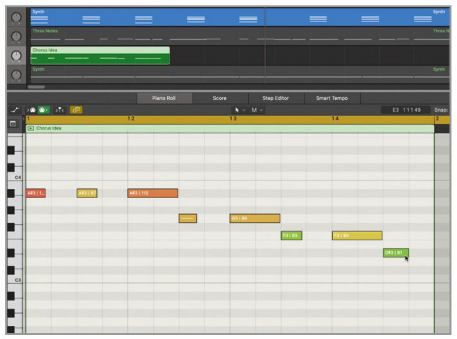
Our final tip is to loop up your backing track and just hum or sing along to it with nonsense lyrics until you get something that sticks, then either record it as a guide or pick it out on an instrument before you forget it!

By Dave Clews

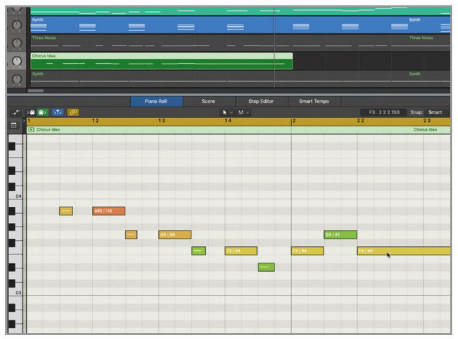
Over the course of his 25-year career, Dave has engineered, programed and played keyboards for numerous artists including George Michael and Tina Turner



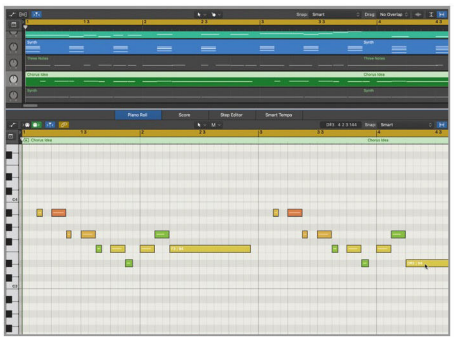
07 Now we have a rhythm, we can start playing around with the notes. Still keeping things simple, we'll stick to a three-note limit for now, using the scale tones either side of our F note – so that's Eb and G. To give the part a more 'finished-off' sound, we've made the last long F note resolve to a tonic Eb note.



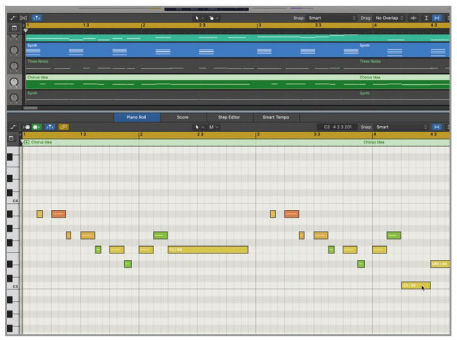
08 For a catchy chorus idea, let's try another angle. We'll start by filling the first bar with eighth-notes, starting with the fifth – Bb – and dropping to a major third – G – then to the tonic Eb by way of the 2nd – F. This progression down the major scale to the tonic, missing out the 4th – Ab, establishes a major feel, ideal for a chorus.



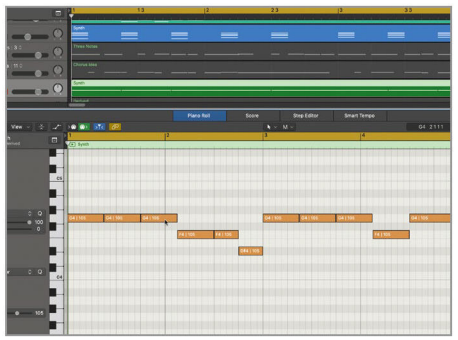
09 Next, we lose the first Bb note to give a sense of rhythmic space, then extend into bar 2 with a finishing two-note flourish that ends on a long F note – this works with the underlying G7sus4 chord (G, C, D, F) and also creates the necessary tension required for our next step – a repetition with resolution.



10 Repetition with resolution is a handy melodic device where you repeat a phrase or series of notes that doesn't resolve to the tonic (ie what we created in the previous step), then resolve the repeated phrase to the tonic. So we copy our phrase, paste it into the next two bars and drop that last F note down to Eb.



11 Now we have a four-bar melody that uses a form of call and response between two phrases to create and resolve tension. Let's prolong that tension by using a technique known as the overshoot. This is where you delay hitting your tonic by 'overshooting' it and landing on a different note – C in this case – before finally resolving a beat later.



12 For a final tip, try deriving your melody notes from the uppermost notes in your chord progression. Duplicate the chord track, eliminate the unwanted lower notes, then play around with the rhythm of what's left. This mega-simple yet hooky example has been derived from the upper notes of our chords.

BLAST FROM THE PAST

Roland MC-202 MicroComposer

A notoriously poor seller upon release, this little gray gadget is a damned near perfect combination of some of Roland's most famous machines

Even the most studied aficionado of analog esoterica could be forgiven for overlooking Roland's MC-202. And that's just what music buyers did upon its release in 1983. A dismal failure at the time, the 202 should have been a runaway hit, slotting in perfectly between the company's much-loved SH-101 monosynth and the legendary TB-303 Bass Line – and not merely in name, but by design, as well.

You see, the MC-202 was something of a mishmash of three of Roland's 1980s classics. Referred to as a 'MicroComposer', it was intended as a successor to Roland's MC-4 and MC-8 MicroComposers, dedicated sequencers designed to control external hardware. Like those beige boxes, the MC-202 sports CV and gate jacks around back, meant for sequencing your favorite analog instruments. Yet the 202 also included a pretty cool in-built synthesizer that bore more than a passing resemblance to the SH-101, both physically and sonically, and its form factor was surely derived from the 303.

Like the 101, it provided a single monophonic oscillator that offered up sawtooth, pulse, and sub-oscillator waves that could be dialed in simultaneously via sliders to create some unusual combination waveforms. Pulse width could be adjusted with a slider, and modulated by the included LFO or the single four-stage envelope generator (which, as on the 101, was also assignable to VCA and filter cutoff).

And then there's that filter, the very epitome of the New Wave sound. The MC-202's VCF section looks as if it were torn right from the SH-101's front panel. A 24dB affair, it offered all of the squelch and squeal we've come to love.

However, the MC-202 wasn't a direct port of the 101, lacking the 101's noise generator, as well as the LFO's square, random, and noise shapes.

Of course, the 202's sequencer would have been a major perk for the very few that bothered to check it out. A two-channel affair (one for the internal synth, one for external instruments), it was capable of storing over 2500 notes... though not across power cycles. Notes could be entered by playing the mini push-button keyboard in real time, tapping in notes and rhythm separately, or by entering pitch, note and rest values via step input. Accent and glide are also on tap for all you acid obsessives.

If you haven't cottoned onto it yet, we'll point out that this little fellow closely resembles the vast number of miniaturized grooveboxes that clutter the tabletops of today's electronic musicians. Though Roland have got some stick for repurposing their old tech in the form of the popular Boutique series, it's clear that they've been down this road before!

Alas, they were 35 years ahead of their time. The MC-202 holds the distinction of being the worst-selling Roland instrument of its decade. Finally receiving some recognition, secondhand prices are beginning to climb, but have not quite reached the heights of the instruments which it most closely resembles.

TECH SPECS

Year of manufacture 1982
Original sale value $190
Current price $500-$800
Number made approximately 4,000

The closest you can get to a virtual 202

D16 Group LuSH-101 **$159**

Dedicated MC-202 emulations are all but non-existent. However, since the 202 shared so much with the SH-101, we can look to clones such as the over-specified LuSH-101 from Polish developers D16 Group. This has all the features and sounds of a 101, plus a beefed up arpeggiator section and modulation matrix.

www.d16.pl

Roland Cloud **$29.95** monthly

For a purely Roland sound, why not go to the source? The Japanese music giants have recently been churning out numerous hardware variants on the 101. A subscription to their new Roland Cloud service will land you a plugin version that integrates with – but does not require – their System 8 Plug-Out hardware.

www.rolandcloud.com

TAL Software TAL-Bassline **Free**

When it comes to SH-101 emulations, it's hard to beat TAL-BassLine, given its price (or lack thereof). However, this fabulous freebie is a serious contender even against commercial clones. It's cross-platform and has a quality sound, as you'd expect from TAL. The interface will be instantly familiar, and seasoned 101-ers will have no trouble getting around.

www.tal-software.com

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Roland

SH-4d

$664

roland.com

By Si Truss

Strengths

+ Rich and flexible sound, including bang-on 101 and Juno emulations
+ Powerful drum machine capable of percussive synthesis
+ Flexible sequencing workflow design

Limitations

- It's a shame there aren't more outputs
- Crying out for a proper keyboard
- No user sound or expansion options

Roland release yet another groovebox that emulates the company's heritage instruments. However, there's real reason to be excited here...

Roland's approach to revisiting their back catalog has become rather scattershot. Between the Aira, Boutique, Zen-Core and Cloud lines, there seems to be no corner of the Japanese brand's history left unexplored. We're at a stage where many classics now have a multitude of modern equivalents across different ranges: you can, for example, currently buy upwards of eight different drum machines or grooveboxes that purport to offer an official recreation of the TR-808.

Into this fray enters the SH-4d, a digital synth module and groovebox that comes equipped with various emulations of vintage Roland gear. In typically disjointed fashion, it doesn't fit neatly into any of the product lines mentioned above. We're told its engine is based on the Zen-Core format but isn't compatible with Zen-Core expansions. Conversely, it's not Aira-branded, but will sync with other gear in the range via the Aira Link system. It's also, however, one of Roland's best hardware instruments in recent years.

The SH-4d is a five-part groovebox, with four polyphonic synth channels and one multi-track drum machine. Its sound engine makes use of a mixture of virtual analog, digital synthesis and sampling in order to offer a spectrum of sounds that range from vintage gear emulations through to modern tones and an array of percussive kits.

The hardware is compact but not as small and fiddly as the Boutique range. It has a sturdy-feeling metal body with robust-seeming knobs and faders that handle sound design duties. Below these sit a 16-step sequencer and two-octave 'keyboard' both of which are made up of shallow, clicky buttons that lack the satisfying heft of a proper TR-series sequencer, but are responsive and spacious enough in use.

The whole unit has a wonderfully retro style, loosely based on vintage SH synths (most notably the late-'70s SH-02). Combined with its sleek, angled profile and the restrained black and white design, it makes the SH-4d one of the most stylish synths in the current lineup.

On the back panel there's a stereo pair of jacks for the main output, a headphone output, and two mini jacks for audio input and analog clock input. These are joined by MIDI in and out ports, plus a USB-C port for both power and connection to a computer. Surprisingly, given its size and how much there is going on, the SH-4d can also run on four AA batteries, for around four hours.

Logical layout

The SH-4d offers 11 synthesis modes, available individually for each of the four synth parts, plus a multitude of sequencing features, but the user interface is neatly laid out in a way that makes

these fairly easy to navigate. The sound engine controls are broken down into oscillator, filter, amp, LFO and effect sections. Of these, it's actually only the oscillator section that changes for each synth mode.

The oscillator section is controlled via four faders, each with a selector button, which are joined by Model, Pitch and Timbre rotaries. For the most part, the function of these changes depending on which of the 11 modes is currently in use.

The first of these modes is the SH-4d engine that gives the instrument its name. This is effectively a four-oscillator virtual analog synth, where each oscillator can have its own wave shape (including noise and a stacked supersaw mode), plus individual tuning, level and shape/pulse width. The second mode is labeled SH-3D, which is effectively the same oscillator model albeit with the fourth oscillator exchanged for an additional LFO.

The next mode is Sync, which offers a classic hard sync sound with an additional envelope for sweeping the pitch of the synced oscillator. Beyond this is a pair of vintage emulations. The first is a clone of SH-101's oscillator section, the second is modeled on the oscillators of the Juno-106.

The next oscillator mode is a simple two-oscillator FM setup. Here we have two waves set up in a modulator/carrier relationship. The controls allow for a variety of waveshapes and tuning ratios to be set for each, as well as an adjustable modulation envelope to alter the modulation over time. Continuing in this digital vein, the next mode is a ring modulator, which works very nicely for creating metallic and discordant sounds.

Another oscillator mode is a wavetable mode. This is relatively simplistic by wavetable standards, and probably the SH-4d's most underwhelming element. There are 31 on offer, which offer a decent range of interesting harmonic sounds, although there's no option to upload user sounds. In this mode, an envelope controls movement through the wavetable and the Timbre control introduces LFO sweeps.

Loadsa modes

The Chord mode, as its name suggests, uses several oscillators arranged to voice a variety of chord shapes. The sound itself in this mode is fairly basic virtual analog, but it's great for classic house/techno chord stabs and sequences.

The Drawing oscillator might be the most interesting. Here the sliders and rotaries are used to manually shape the oscillator wave, as represented on the SH-4d's screen. Using this mode it's quite easy to conjure results reminiscent of West Coast synthesis and waveshaping effects.

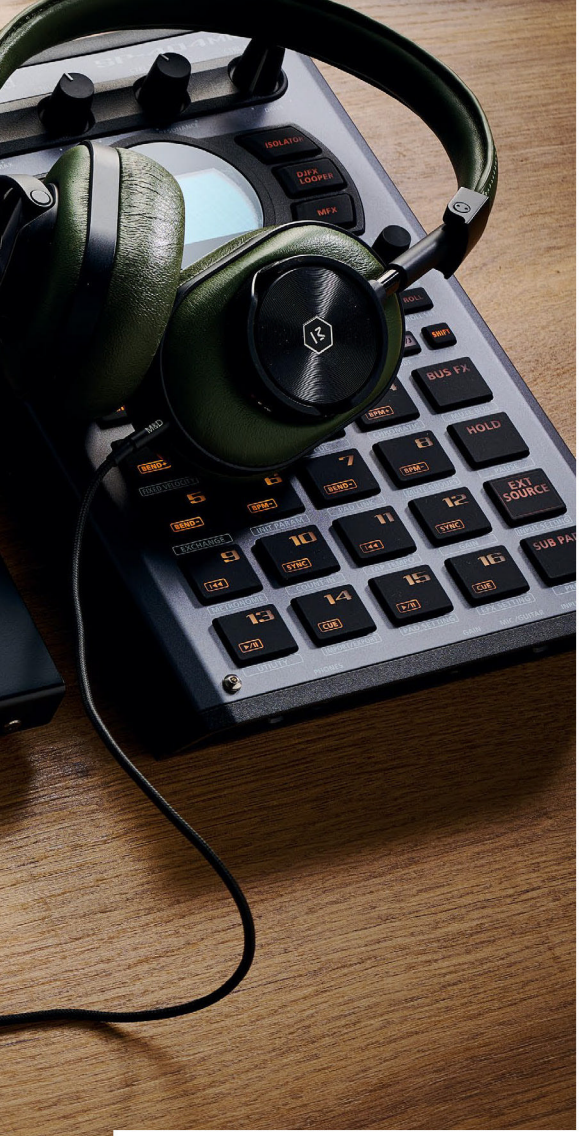
The final synth oscillator mode is based around PCM samples. This is a fairly functional inclusion, acting a little like an 'anything else you need' tool, ticking off whatever boxes aren't covered by the preceding oscillator types, including samples of a variety of other classic Roland instruments, pianos and organs.

All of these oscillator modes share the same subtractive signal path beyond the oscillator section. First up is a multimode filter with resonance and drive controls. The filter has its own ADSR envelope, plus an additional high-pass filter for rolling off low end. Beneath this is an amp section with another ADSR envelope, plus pan and level controls. At the bottom sits the multimode LFO section. All of these controls are available for each of the synth parts individually, as well as each individual drum sound (with only a few exceptions).

The final element in the chain is the effect section, which can apply processors in several different ways. The first is a multi-functional effect slot applied per-part. This has a range of effects, including vintage emulations such as the

Rhythm nation

The SH-4d's rhythm track is more than just another TR-emulation. This polyphonic section hosts full drum kits of 26 parts. Each part layers two individual drum samples. The range here balances an assortment of classic Roland sound and staple drum tones, but also melodic tones and synth waves. Each drum part features a snappy pitch envelope, meaning the drum engine can be used effectively from drum synthesis too. Not all of the synth functions are available for each drum sound, but each sound does get its own filter and ADSR amp envelope. It means that, rather than being a basic rhythmic accompaniment, the SH-4d's drum section is a powerful drum machine in its own right. Combined with the sequencing and automation, there's a lot of potential flexibility.



original Juno chorus (with adjustable noise level), alongside the expected range of reverbs, distortion, delays and much more. This is joined by a trio of effect sends, for reverb, chorus and delay – each switchable between a variety of different models.

The final element is a master effect, applied to the final output, so processing all of the synth and rhythm parts as one.

There's already a lot that can be done with just these up-front controls access via the front panel, but the SH-4d goes considerably deeper through various menus and shift functions. There is, frankly, far too much to go into here, but options include a comprehensive modulation matrix, advanced LFO tools, and a heap of additional options for shaping each oscillator mode.

The sequencer side of the SH-4d is similarly well-equipped. Each part has its own polyphonic sequencer, which can have its own individual sequencer length up to 64 steps, along with an assortment of different playback rates and directions. Each individual note can be assigned its own gate length, velocity and probability settings, on a polyphonic basis for each step. Sub steps allow for flams and ratchets to be programmed. Motion recording allows for parameter changes to be recorded into each step as well.

Light and SH-4d

As well as more straightforward step sequencing, the SH-4d also allows for real-time 'live' recording, as well as a cool vintage-style step sequencing mode that replicates the more simplistic workflow of the SH-101 sequencer. On top of all this, the SH-4d also finds space for a well-equipped arpeggiator and 'D-Motion' function, which lets users make use of a built-in movement sensor to modulate parameters by physically tilting the unit.

There is a lot going on here then, a great deal more than we can really do justice to in the space of this review.

Possibly more than any other recent Roland device, this really feels like a well thought through and complete package, one that offers a whole range of functions for both studio and live users. It also sounds phenomenal. The faux analog elements are rich and hefty and sound bang on the money when put side by side with their vintage counterparts. Being able to pair these with the interesting digital modes, and flexible drum design tools is a real treat, and users will likely get a lot out of this one box before even considering integrating it with a DAW or additional gear.

As for weak spots? The lack of additional physical outputs is a shame. As with a lot of other recent Roland gear, the SH-4d can output its individual parts to a DAW via USB, which is handy. For live performance use though it would be nice to have more analog outputs.

Also, as much as I do like the desktop module format, this is crying out for a proper keyboard version, allowing users to properly perform with one of the synth parts. On that front, it's a shame there's no option to layer or split the different timbres across a MIDI keyboard.

For some, the lack of user sound upload may be a sticking point – neither wavetable or PCM engines can make use of custom sounds, and the SH-4d can't access Zen-Core model upgrades either. Don't underestimate the flexibility of what's included though. Given the synthesis capabilities, it really does make sense as a self-contained device.

These points aside, this is a rich and flexible instrument with a wealth of functionality that rewards play and experimentation. Among a mass of Roland products, this is the one most worth your attention. ■

THE ALTERNATIVES

NOVATION
Circuit Tracks
$390
Circuit Tracks offers a similar synths-and-samples ethos, albeit in a manner more immediate but less deep
novationmusic.com

ROLAND
TR-8S
$708
If basic rhythm and sample sequencing is what you're after, the TR-8S is still the other high point of Roland's current product line
roland.com

Arturia

Pigments 4

$212

www.arturia.com

By Dave Gale

Strengths

+ An impressive analog replication of the 303's sound
+ Saturation and delay bring the sound to life
+ Sequencer is easier to use, and more versatile, than many 303 clones

Limitations

- Visually uninspiring
- It's affordable, but not the cheapest 303 clone by some margin
- Some users might prefer a more authentic 303 workflow

The next generation of this creative synthesizer from Arturia adds a new splash of tonal color to an already burgeoning palette

Arturia need no introduction when it comes to recreations of vintage synthesizers for your desktop delight. They were one of the first companies to ride the classic synth wave in software form, but if you crave a softsynth with contemporary tendencies, the company's Pigments may well be the answer.

Core recapitulation

Pigments is a highly programmable software synthesizer, which employs a stylish interface to allow quick and easy editing and creation of new patches. It's very, very powerful. At its core are two assignable sound engines, which allow flexible sound generation from four different synthesis quarters; Analog, Wavetable, Sample and Harmonic.

While the Analog oscillator is at the simpler end of complexity, there's plenty to use. Apart from five classic wave types, there are actually three oscillators on offer, as part of each single engine. Wavetable provides a superb source, with plenty of scope for modulation across several aspects of wavetable operation, from wave travel to morphing, and all with helpful graphics to guide your editing.

The Sample engine allows basic sample playback, alongside a whole plethora of granular controls, while Harmonics operates as a highly adaptable additive oscillator, also with plenty of control. You'll also find a Utility engine, to add further color, such as White noise.

Some of the enhancements of Pigments v4 exist through a number of improvements within the sound engine department. Wavetable now sports Ring Mod, while there have been significant improvements to the Unison operation across all sound engines.

Pigments already sounded pretty fruity to us, but when we got to grips with the tech, we found that these enhancements provide added value to an already classy core.

> "One of its exceptional strengths is its ability to modulate just about any aspect of a sound that you could ever wish to"

MS Filter

The Pigments filter section remains substantial, with two assignable filters, which include offerings from other Arturia favourites, such as the Jupiter 8, Minimoog and Oberheim SEM. A new addition is the MS20 filter, which is very welcome, thanks to its aggressive tendencies and ability to squeal on demand. Arturia have also made a number of enhancements to the existing filters and effects, such as considerable additions to the Bitcrusher section, and a new FM control within the Jupiter filter.

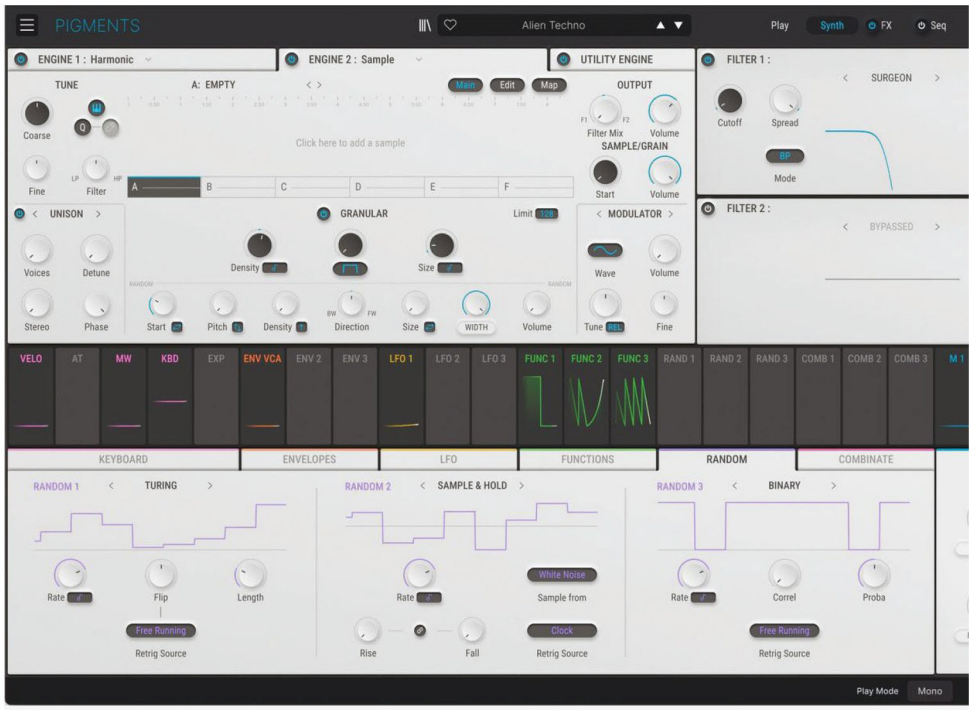
Old and new mod cons

One of the exceptional strengths of Pigments is its ability to easily modulate just about any aspect of a sound that you could ever wish to. The process of applying modulation remains blissfully simple. The modulation grid, which runs across the middle of the plugin, provides a beautiful drag-and-drop function, which seamlessly puts a modulation in place. This remains unchanged and as usable as ever. With three LFOs, Envelopes, assignable shapes within the Function section, and Randomization, you are unlikely to be left requiring further modulation options, particularly when you consider that these modulation sources may also be shared across destinations

Arturia have included plenty of new content within version 4. There is a host of new factory presets which includes three new sound banks, all of which are curated into menus. These are accompanied by 63 new sound engine wavetables, 67 new included samples, and 36 new noise types.

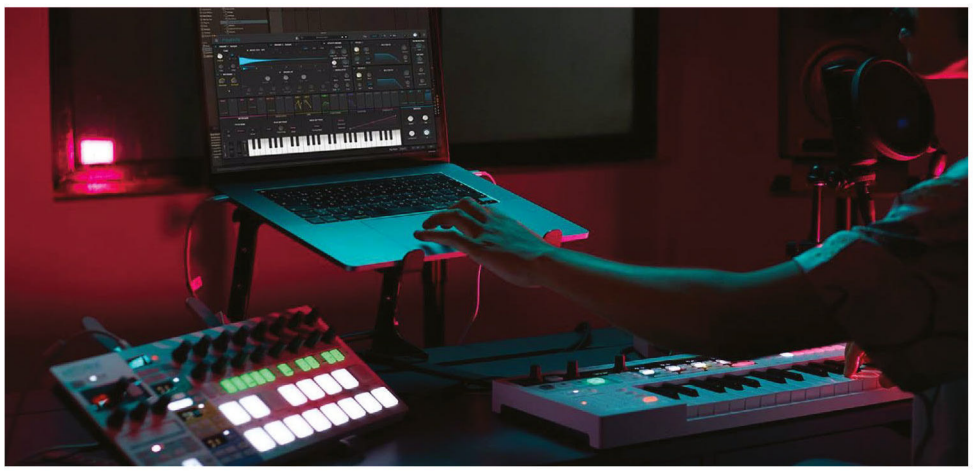
Final colorations

Pigments has always been a powerful product, and while you may be forgiven for thinking that there isn't a vast amount of change within version 4, it remains one of the most inviting and versatile synthesizers in software, with a sound engine which will impress across most areas. While the preset content will show off the package nicely, it is the ability to get down and deep with the programming which excites us the most. Whether you are jumping on for the first time, or simply upgrading, it is worthwhile in all circumstances.



Getting Mod'd

There are plenty of synthesizer products on the market that can sound impressive through their initial salvo of collated presets. While many of us are happy to occupy the preset domain, it is the ability to put your own spin on a sound that is likely to set you apart from the rest of the crowd. With this in mind, we are big fans of Pigments. It offers a relatively rare commodity through an interface which manages to keep things simple, while exhibiting the details you need uppermost. Moreover, the ease and clarity with which you can apply modulations is a huge selling point for us. It is the ability to modulate synthesizer elements and controls that will generate movement and color in your sound. When this is as easy and effective as it is in Pigments, you would be daft not to use this to its fullest capacity. If you are feeling particularly brave, call up a default patch, and build your sound from the ground up.



THE ALTERNATIVES

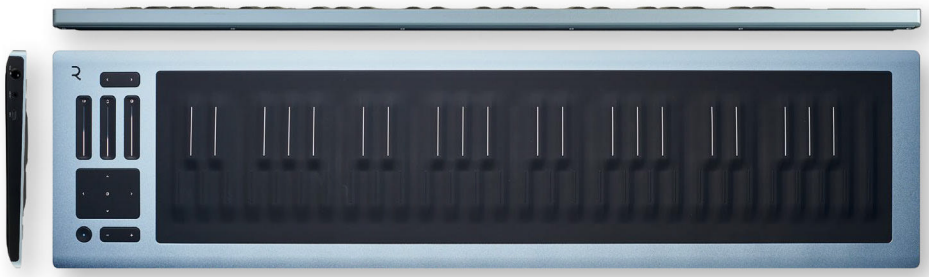
CHERRY AUDIO
Sines
$59
A synthesizer that provides frequency modulation en masse

U-HE
Zebra 2/Legacy
$112
The next level up from our own ZebraCM provides complex wave structures and modulation routing options at an affordable price

Roli

Seaboard Rise 2

$1,399
roli.com



By Daryl Robertson

Strengths

+ More robust chassis than the previous version
+ The new precision frets result in more accurate playing
+ Seamless integration with Equator2

Limitations

- There's definitely a learning curve to overcome
- Easy to get lost on the keyboard
- Not all the included sounds in Equator2 benefit from MPE

Roli's long-awaited sequel has finally arrived. Daryl Robertson finds out if it rises to the occasion

Finally, eight years after its launch in 2015, the long-awaited sequel to the Seaboard Rise has arrived, and it includes a few noteworthy changes that make this futuristic production tool a lot more playable to non-Seaboard veterans.

The most significant departure from the original Seaboard is the brand-new silicone playing surface, which Roli call Keywave2. As well as a slight change in the size and shape of the keys, Rise 2 now includes "precision frets" to make it a lot more playable. The original Seaboard's vast playing surface easily drifted out of tune, so these fret markers are a welcome addition. We can happily report that they certainly do the job they were designed to do. The ridges are significant enough to feel them while playing – meaning you can now finally look away from your controller without fear of your pitch wavering – while also being discrete enough to still allow you to glide around the Seaboard with grace.

The rubber keys take some getting used to. We found the lack of movement in the key a little jarring at first. When you are so used to the mechanical mechanism of a real keyboard, you miss that tactile feedback when it isn't present. This is the biggest hurdle many pianists face when trying to adopt the Rise 2 into their workflow – but after a change in mindset, you should be able to get to grips with the unorthodox playing surface. If we were to have one complaint, it's that while the all-blacked-out aesthetic looks great, it is easy to get lost – especially if you are used to the monochrome layout of a traditional keyboard.

All aboard

Those familiar with the previous version of the Rise will notice that its successor now sports a new up-market design. This aluminum chassis not only looks stellar but it hints at vast improvements to the overall build quality of the Rise 2. As a result, this unit feels reassuringly weighty and impressively sturdy – not only does it look premium, it feels it.

The new Rise 2 also includes standard MIDI and USB-C ports in order to ensure maximum compatibility with your software and hardware instruments, as well as the Touch Fader controls, integrated battery and Bluetooth MIDI that are found on its predecessor.

As you'd expect, the Seaboard Rise 2 comes with a wealth of extras, including Equator2, Roli Studio and Ableton Live Lite – with Roli's very own Equator2 being where all the fun is had.

This insanely powerful synth perfectly integrates with the Seaboard's multi-dimensional controls to create otherworldly sounds and textures. ■

Donner

B1 Analog Bass Sequencer

$223
idonner.eu

By Si Truss

Strengths

+ An impressive analog replication of the 303's sound
+ Saturation and delay bring the sound to life
+ Sequencer is easier to use, and more versatile, than many 303 clones

Limitations

- Visually uninspiring
- It's affordable, but not the cheapest 303 clone by some margin
- Some users might prefer a more authentic 303 workflow

Donner enter the analog synth realm with a 303 clone that sounds the part – even if it doesn't look it.

Donner are already fairly well known in the guitar, drum and piano spheres for budget-friendly instruments. Recently, however, the Chinese brand have been moving into the production market, with some compact controller keyboards – expect reviews of these in coming issues – and, most interestingly of all, an analog monosynth, the all-new B1.

The B1 Analog Bass Sequencer – labeled Donner Syn Bass, confusingly – isn't much to look at. Its black and gray color scheme, rubber keyboard and calculator-like function buttons give it a look somewhere between budget MIDI controller and something you might use to process your taxes. Behind the uninspiring exterior, however, lies an affordable and remarkably accurate-sounding recreation of one of the most characterful bass synths of all time – Roland's TB-303.

The core sound engine is pretty much a straight recreation of the 303. There's a single oscillator, switchable between saw and square wave, with just a coarse tuning dial for control. This feeds into a low-pass filter with controls for Resonance, Cutoff and modulation Depth. In terms of shaping, there's just a single Decay control that affects filter modulation, which is joined by an Accent control that adjusts the amount of filter and envelope response triggered by accented sequencer steps.

How low can you go?

It's not much to work with, but as proven by its original inspiration, these scant parameters are perfect for shaping punchy, squelching resonant bass riffs. Donner have done a decent job of replicating the specific ways in which Roland's bass synth responds too – the filter still lets a fair amount of mid-range content through even at its lowest cutoff setting, much like the original, and the resonance responds in a way accurate to a genuine 303.

This basic sound engine is augmented with a pair of simple built-in effects. The first of these is saturation, which is controlled via an on/off switch and dials for drive and tone. The moment you turn this on it adds an audible heft to the tone, even with the drive at its lowest point, and the tone control has a wide range that acts like a low/high-shelf EQ at the extremes. The effect brings out the raspy aggression of the filter – exactly what you want from a distorted 303.

The second effect is a simple tape delay emulation. This has an on/off switch, and controls for Level, Time and Feedback. At its

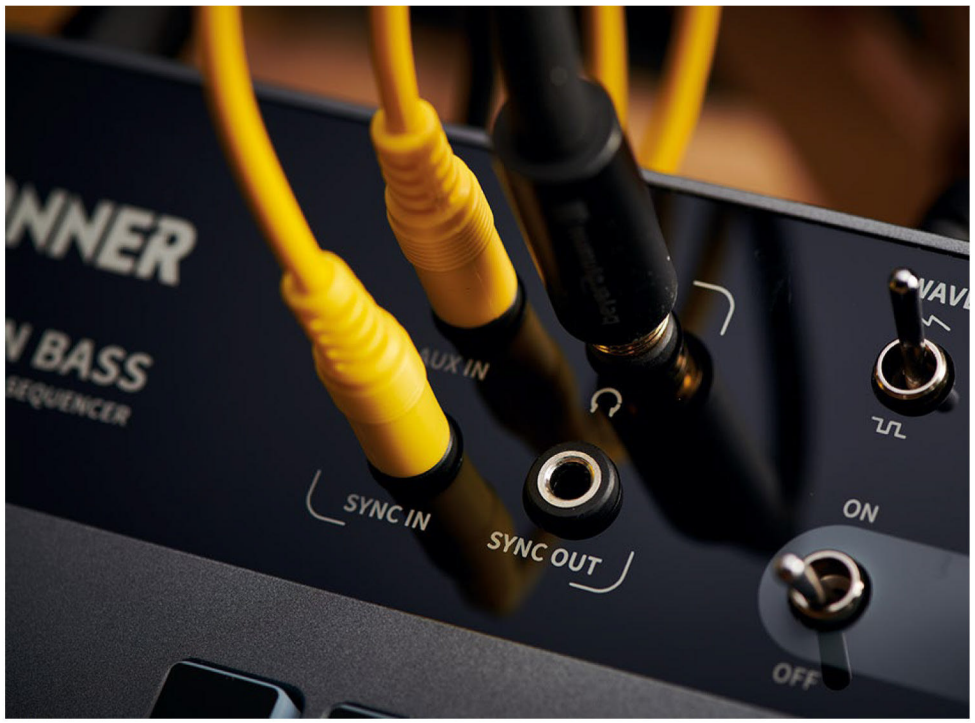
fastest rate, the delay can function like a nicely uncanny reverb, which works great for adding presence to the overall sound. It's a shame the feedback doesn't go to extreme settings in order to create gnarly repeat builds, but the effect does a decent job in context.

Where the B1 differs more dramatically from its inspiration is in the sequencing workflow. The original TB-303 used a small button-based sequencer with an awkward workflow that involved inputting pitch and timing – note triggers, rests, slides, accents and octave jumps – separately. This led users oto rely on blind experimentation as much as careful composition when programming patterns.

Donner's take simplifies this significantly, coming with a two-octave pad keyboard, which allows the synth to be played chromatically. Sequencing is simpler too; steps are input one-by-one, allowing users to select

Authenticity vs convenience

It's worth noting that, awkward as it was, the peculiarity of the 303's workflow played a large part in the distinctive 'acid' lines it's become known for producing, and users coming to the B1 having no experience of the original may find themselves wondering why their sequences don't sound quite like those of famous acid house and techno records. It is perfectly possible to capture authentic-sounding 303-style patterns with the B1 – in fact its generous 128-slot pattern memory comes stocked with plenty to get you started, all transposable via the keyboard – but it's worth reading up on the original if you want to faithfully recreate its spirit.



a pitch and then input note length and assign slides or accents before moving on to the next step. The B1 also expands on the capabilities of the original's sequencer. Users can select between eight different gate lengths for each step (the top is a tied note). It allows ratchets to be programed on each step, creating quick rolls that retrigger the note up to four times. The B1 also features a simple arpeggiator with a selection of eight pattern/range combos.

Donner summary

The B1 offers other modern conveniences. Around the back the main output is joined by MIDI in and out ports, plus a USB C port for DAW control. These are accompanied on the front panel by 1/8" jack ports for analog sync out and in, plus a separate headphone output and aux input. There's also a basic companion app for desktop that allows for editing of sequences and firmware updates. All of which are handy, although it's a shame there's no CV connectivity, as present in various forms on the original and most hardware clones.

The B1 sounds on-the-money in replicating the 303, has some solid effects, and is a very reasonable price. The elephant in the room is Behringer's TD-3, an accurate-sounding analog 303-clone, currently around half the price of the B1 in the UK. Behringer's clone certainly looks the part more, is more faithful in its sequencer design, and matches the CV outputs of the original. The B1, however, is easier to program and its additional playability and sequencing tools mean that it can do more than simply replicating straightforward acid bass riffs. Its delay is a great addition too.

That said, while the B1's sequencing offers extra flexibility, the synth engine itself is still as bare bones as any other 303-alike, and without features like a full amp envelope, additional oscillator or variations in filter mode, the sonic range is effectively limited to a single – albeit very desirable – style. ■

THE ALTERNATIVES

BEHRINGER
TD-3
$120
Behringer's 303 clone looks and sounds just like the original, and includes many of its awkward eccentricities too
behringer.com

KORG
Volca Bass
$157
The Volca Bass isn't a straight 303 clone, but it's definitely influenced by Roland's original. There's more versatility here though, thanks to multiple oscillators
korg.com

ROLAND
Cloud TB-303
From $9.99 per month
Roland's official software emulation is the most authentic replication you'll find of the 303 in the plugin realm
rolandcloud.com

CIRCUIT TRACKS

Sequence. Make Tracks. Perform

An Extraordinary Standalone Groovebox for the Modern Producer.

Circuit Tracks is an agile groovebox for creating and performing electronic music without resistance. Let your creativity thrive and lose yourself in a seamless workflow with an acclaimed hands-on sequencer. Expand your sonic capabilities with two refined polyphonic digital synth tracks. Load your own samples and shape them to perfection across four drums tracks. Pilot your setup with two dedicated MIDI tracks, or unplug and create anywhere using the built-in rechargeable battery.

novation

novationmusic.com

Toontrack
Hitmaker SDX

$174
www.toontrack.com

By Dave Gale

Strengths
+ Absolutely stunning collection of drum sounds
+ Huge variation in tone across six kits
+ Very stylish ambient signal path

Limitations
- You'll need to have Superior Drummer 3 to access these sounds

Looking for great drum hits and grooves? Why not hire the Hitmaker, as this expansion pack applies the Invisible Touch of Hugh Padgham...

For anyone in need of great drum resources, Toontrack have you covered. The entry-level EZDrummer suite provides anything but entry-level sounds, while Superior Drummer 3 takes the drum sampling concept to dizzying heights, benefiting from the ability to add extensive and highly crafted expansion packs, to create a hugely versatile library.

Bringing on the Hits

Their latest Superior expansion is the Hitmaker SDX, which secures the talents of producer Hugh Padgham, alongside the virtuosity of drummer Norman Garschke. Hitmaker draws inspiration from some of Padgham's career highlights, with references to Genesis, the Police and 'that' Phil Collins drum sound. You know that legendary drum fill on 'In the Air Tonight'? Yep, that sound...

Many of those original sessions were undertaken at Townhouse Studios in West London, which regrettably shut its doors to recording some years ago. So Padgham and Toontrack decamped down the road, to the equally prestigious British Grove studios, recreating many of the Townhouse environments and capturing some of the most identifiable drum sounds in pop history.

While there are several references to those classic sounds, with stylish and exacting drum grooves to accompany the sonics, don't go thinking that this is merely a nostalgia-fest. There's a colossal amount of sampled content, all of which extends to six full kits, with individual drum swap-out options, and a host of electronic sounds. Eleven drum machines have also been sampled, along with electronic Simmons kits, with playback through a PA system to capture ambiences associated with so many hit records. There are 400 electronic sounds in all.

So regardless of your penchant for pop nostalgia, this SDX will provide a worthy source of great new drum content, to accompany the already plush and included Superior library.

Kits, presets and mixes

The first kit in this suite of six is named the

> "Don't get hung up on the Hitmaker's calling card – the range of drum timbres are great for many scenarios"

Center Stage Kit, and hints heavily at the infamous Phil Collins sound. While the kit itself bears much of the responsibility for the sound, it is the use of ambient room mic'ing which adds much of the color.

In line with all Toontrack SD3 libraries, the mixer section provides an enormous amount of flexibility, with multiple kick, snare and ambient mic channels. Both Toontrack and Hugh Padgham have curated a series of wet production-ready mixes, which deliver many of the identifiable sounds linked with this library. The inclusion of entirely dry mixes does serve as an excellent starting point, though, if you just want a great kit sound that you can use in your own music production.

Other kits in the series draw inspiration from drummers such as Manu Katche and Vinnie Colaiuta, known for their work with Peter Gabriel and Sting, respectively. But one kit that stands slightly left-of-center offers the superbly tight sound associated with Stewart Copeland; the Reggae Rock Kit. Replete with high-pitched drum heads, the hi-hat sits proud sonically, with that beautiful sharpness of tone that was so stylized by Copeland's amazing playing with The Police. The set is completed by four Octoban tube-shaped toms, which Copeland was known for regularly exploiting on his fills and intros.

Ambience, Balls and Biscuits

It's impossible to discuss this library without dealing with the iconic drum sound which went on to be played by a drummer in a gorilla suit in an advert for chocolate. According to Padgham, one of the main protagonists for the In The Air Tonight drum sound, was the live-room's talkback microphone, described as the Ball and Biscuit microphone, due to its appearance. Completely by accident, the talkback channel was opened while the drums were being played, and the genesis of a sound was born. This mono channel is represented on the SD3 mixer by name, with the sample path being squashed using SSL compressors, delivering that highly identifiable sound. Throughout the library, there are many references to ambient and room microphones. This can provide something of a date stamp, and might not be required, which makes the presence of an individual fader for each of these ambient components even more usable and appealing. You can move from classic Collins to contemporary pop by decreasing the ambient color.

The Invisible Touch

This is a very stylish and usable suite; the broad range of drum timbres are usable in so many mainstream scenarios, it's probably wise not to get too hung up on the musical associations which act as the Hitmaker's calling card of the past. The electronic elements are equally sophisticated, with iconic patterns from Collins and Genesis tracks. If it's your whim, you could very happily recreate the sound of those tracks with alarming accuracy, but once you've got that out of your system, this library will serve you so well, as an exemplary and complimenting package to other drum sounds in SD3, or the wider SDX series ■

The Center stage kit; modeled on the iconic Phil Collins kit

THE ALTERNATIVES

TOONTRACK
Decades SDX
$174
Another beautifully crafted expansion pack, including five kits with a clear American slant

NATIVE INSTRUMENTS
Studio Drummer
$152
Three beautifully recorded kits from Pearl, Yamaha and Sonor

KRK
SYSTEMS

KRK

GoAux series

from $412
krkmusic.com

By Jon Musgrave

Strengths

+ Sold as a complete kit with padded travel case
+ Simple and adjustable table top stands
+ Overall good sonics for the size
+ GoAux 4 includes integrated room correction feature
+ Front-mounted level control and headphone output

Limitations

- Sound lacks the fullness of larger nearfields

Need to take your monitors with you? KRK might have the perfect solution for you

GoAux 3 and GoAux 4 are the new on-the-go speakers from KRK and each kit comprises a pair of monitors in a padded travel case with space for all the extras. The GoAux 3 and GoAux 4 use a 1" fabric dome tweeter coupled with 3" and 4" glass aramid woofers respectively, and the classic KRK yellow color scheme is in full effect. Each speaker has an adjustable stand, is Bluetooth capable, has built-in EQ (HF and LF), onboard headphone output and front-mounted standby switch/level control.

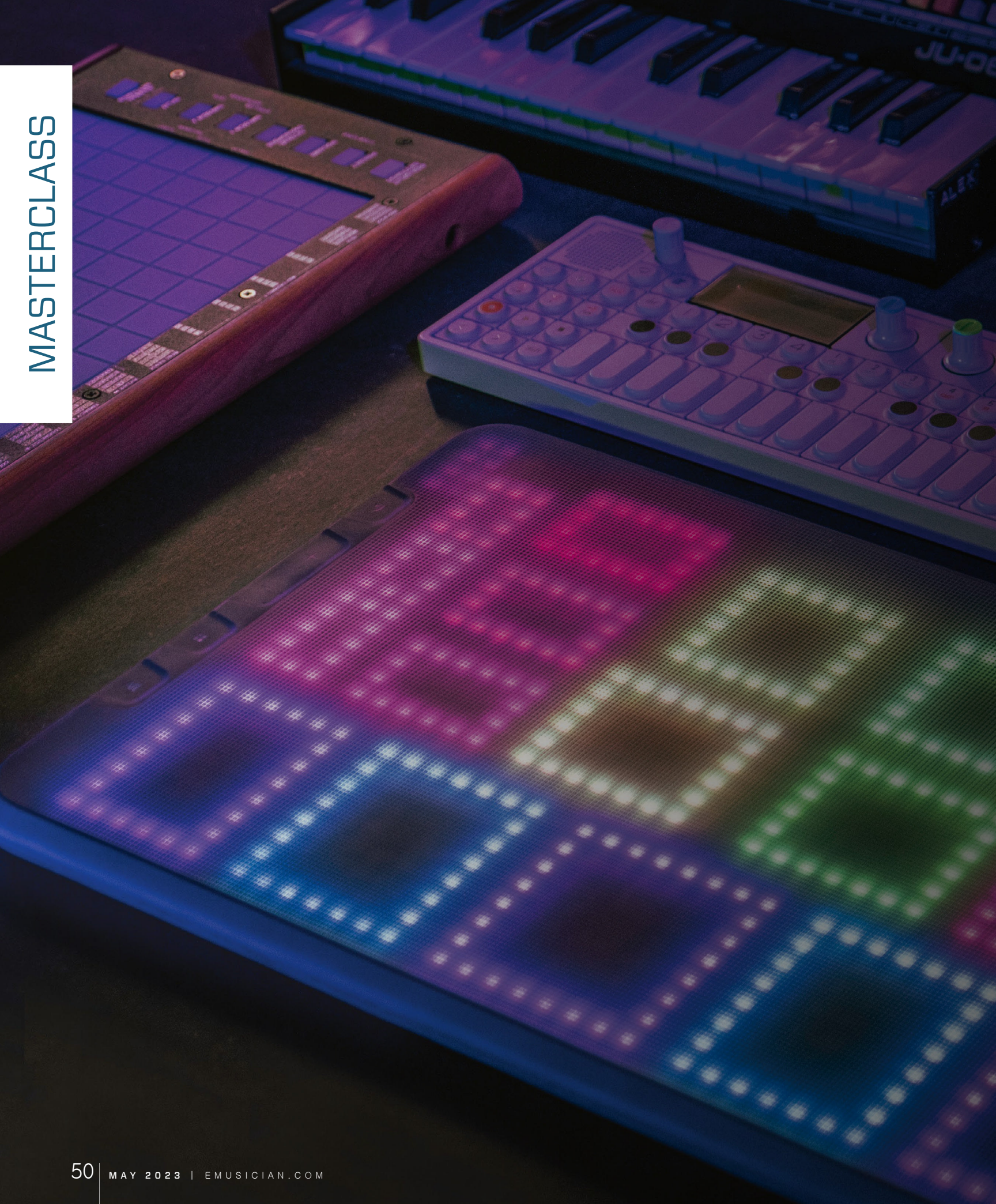
Like a number of compact monitors, each GoAux pair uses common amplification (Class D). One loudspeaker (the left) essentially has all the input connectivity, power, settings, amplifier, volume control and headphone output, and the other is a remote unit linked via a lead, which in this case is a pretty robust and surprisingly long (4.5 metre) proprietary 4 core cable. For physical inputs, both designs include RCA and 1/8" minijack, and GoAux 4 also has 1/4" TRS jacks and USB (B type). So, armed with a regular A type to B type USB cable you can connect the GoAux 4 directly to a computer, selecting the KRK Realtek driver as your output device. The GoAux 4 also includes ARC – automatic room correction – which I'll discuss below. Both GoAux sizes include bespoke table top stands, which you bolt to the underside of the monitor. These incorporate simple adjustment that facilitates the correct upward angle. In terms of EQ, both bands have three positions (boost, cut and flat) with respective soft switches. The buttons cycle round the settings, and LED indicators show the setting, which is handy in the dark.

KRK on

The rear-ported configuration enhances the low end enough so you don't feel they lack punch, but the low mid region doesn't have the same presence as a larger monitor. It's not a deal breaker as the overall delivery is very good, it's just something you need to adapt to when moving from more traditional near field sized monitors.

GoAux 4 includes automatic room correction (ARC). To get started you plug the included lavalier-style mic into the front of the left speaker, clipping it to you while you sit in your monitoring sweet spot. Selecting the rear-mounted ARC button activates the low frequency test tone cycle and once completed ARC applies a corrective curve. You can then use the same button to switch the correction on and off. In my space the difference was noticeable but not dramatic, but the outcome made sense, particularly having heard the peaks and troughs in the low frequency tone cycle.

Overall, KRK have done a good job with GoAux, delivering compact and portable monitors with a very workable sound. ■



MPE MVPS

This month, let's look at where we are with hardware controllers and examine the rise of the MPE controller – and whether it is still the future of software music production...

Expression and music have always gone hand-in-hand, and while the humble MIDI keyboard has served us well as the bedrock of our computer music infrastructure, even greater means to explore sounds are available now. Scanning the range of MPE controllers, unusual wearable devices and real-instrument-aping performance tools, it's becoming more clear that this manner of control will likely transform musical approaches over the next few decades. So, where exactly are we, and what can we expect?

It's not just about the keyboards anymore. From squidgy keys to wearable rings, bounceable beat-makers and distance-sensing crystal balls, the array of unusual MIDI control options today is expanding exponentially. With the ratification of the MIDI Polyphonic Expression (MPE) protocol in January 2018, the floodgates were well and truly opened to nuanced expression, and a new era of control was envisioned. For many, traditional software control has been the stable foundation on which to explore plugins, virtual instruments, soft synths and sample libraries, yet true human expression, akin to performing with a real instrument, has always been difficult to simulate. Mod- and pitch-bend wheels (coupled with automation) can be great creative assets, but are limited by their simple up/down nature as to what they can achieve, and how truly responsive you can be.

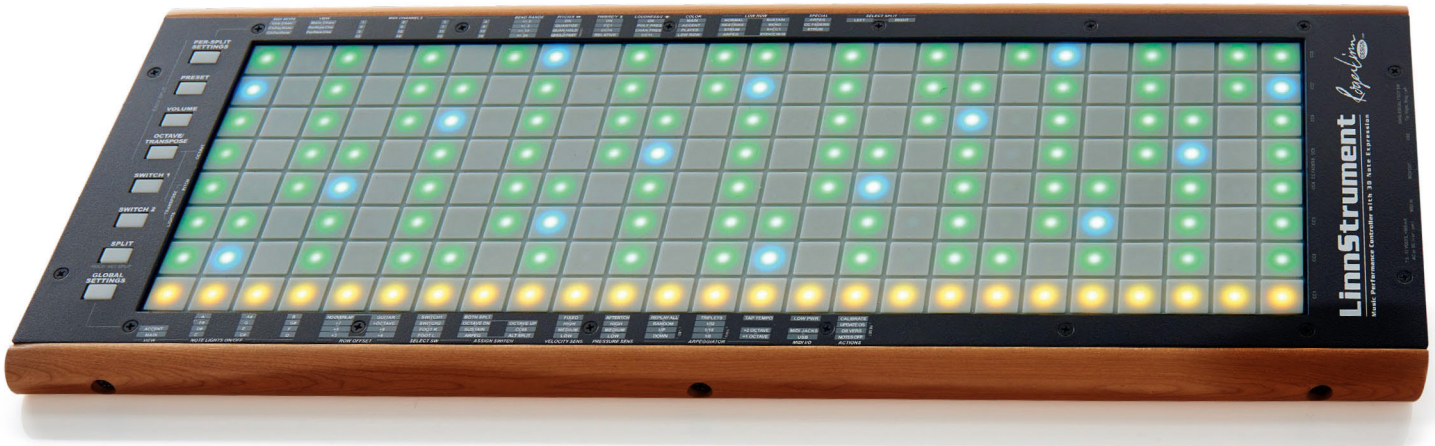
The central thrilling idea of single-notes being able to individually explore via numerous modulations and expressions, in a polyphonic context, is a field of exploration on which visionaries like Roger Linn (and his LinnStrument), ROLI, Keith McMillen Instruments and Sensel have established their reputations. Alongside their astonishing innovations, we've also seen a gamut of enticing gear that has embraced multi-dimensional expressivity. In this feature we'll swim through this ocean of dazzling devices and highlight those that could make the biggest difference to the way you make music.

While MPE is certainly an exciting avenue, there are also other routes to growing the ways in which you express yourself. Touchscreen tech is now more widespread than ever, and can provide more natural integration into your workflow. We'll also be delving into the range of wearable instruments, and instrument-adjacent MIDI controllers that enable you to feel like you're performing your virtual instruments in the real world.

It's not difficult to imagine a future where basic MIDI control is looked back upon as merely the first step on the road to a much wider assortment of music controller choices, but before we sprint headlong into that vibrant future, let's take stock and track the evolution of software control...

MPE controllers

Six of the best MIDI polyphonic expression controllers out now

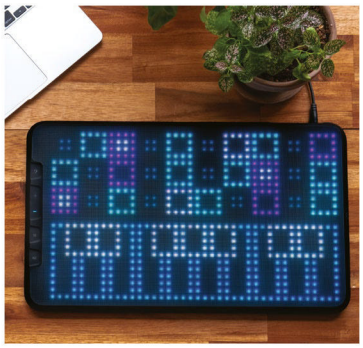


Roger Linn

LinnStrument $1,680

One of the originators of five-dimensional control surfaces, Roger Linn's LinnStrument contains rows of illuminated squares which can be assigned to consecutive semitones, and tuned to match that of a real instrument, leading to a robust, real-instrument-like pitch with a glide-able playing surface. Finger movements can alter modulation effects, meaning the LinnStrument can be used a number of ways.

www.rogerlinndesign.com



Embodme

Erae Touch $900

A newcomer to the MPE stable, Erae Touch takes its cues from the MPE forerunners and adds some astonishing visual illumination to an ever-shifting, pressure-sensitive play surface. Designed as an all-in-one performance instrument and composition hub, Erae Touch allows you to build complex rhythms, harmonies and rippling leads all via its multitouch-pad.

www.embodme.com

ROLI

Seaboard Rise 2 $1,320

The latest version of the MPE flagship, the squidgy notes of the Seaboard Rise 2 integrate perfectly with ROLI's bespoke Equator 2 synth, granting 5D expression control via striking, gliding, sliding, lifting and pressing. Using the Seaboard's patented keyboard allows users to explore far more avenues of sound than conventional MIDI control. It's also lightweight and gig-ready.

www.roli.com

Joué Music

Joué Play $300 per bundle

Emphasising the variety of approaches that MPE control leads to, Joué Music's Play presents a central instrument with a responsive play surface, and a range of colorful alternative overlay pads. With financial boosting from Kickstarter, this novel concept has found favor with a huge range of musicians. There's overlays for drums, strings, keys and much more, meaning that the learning curve is less steep.

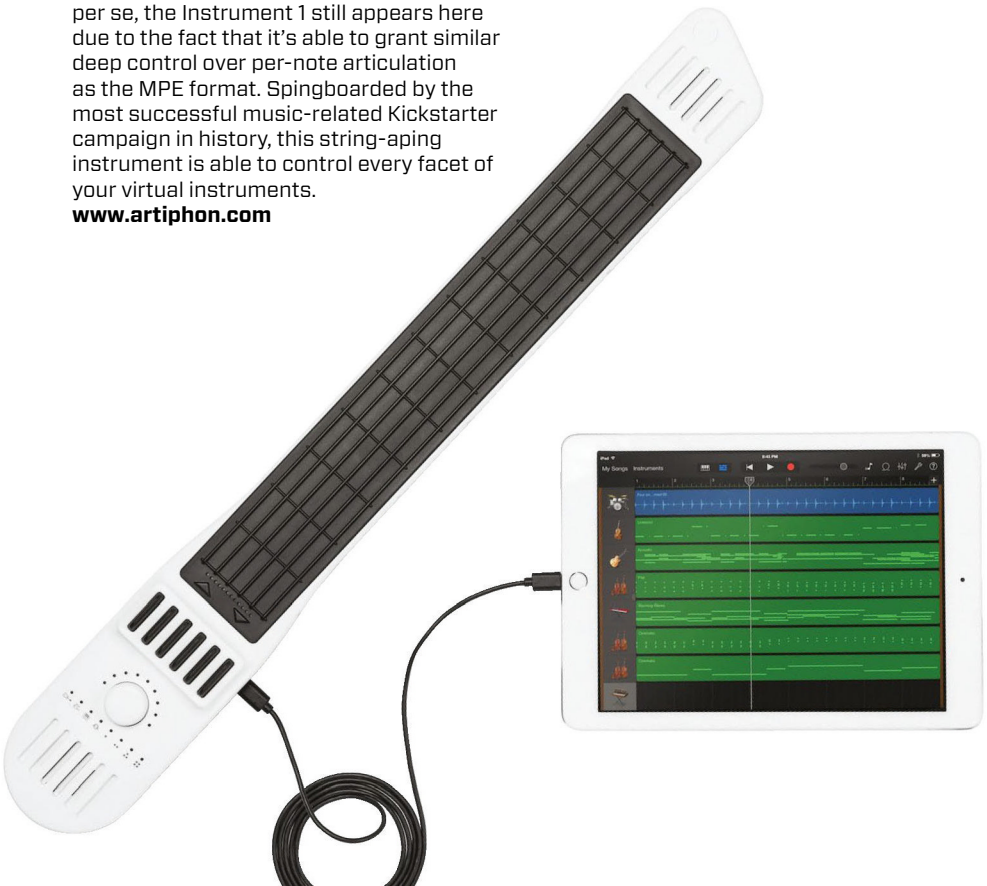
www.jouemusic.com

Artiphon

Instrument 1 From $390

Technically more of a glorified MIDI controller than an actual MPE controller per se, the Instrument 1 still appears here due to the fact that it's able to grant similar deep control over per-note articulation as the MPE format. Spingboarded by the most successful music-related Kickstarter campaign in history, this string-aping instrument is able to control every facet of your virtual instruments.

www.artiphon.com



Keith McMillen

K-Board Pro 4 $960

Closer to a real keyboard than many of its siblings, Keith McMillen's K-Board Pro 4 utilizes Smart Fabric Sensors to grant five expressions of control. It's a great bolt-on to a hardware synth, and the programmable KBP4 Editor software allows you to set the whole thing up with real ease.

www.keithmcmillen.com

MPE synths

It's not all about controllers: let's welcome synths to the MPE party, too. Here are six of the best in hardware and software

Audio Damage
Quanta 2
$132

Melding analog and digital synthesis approaches, Quanta 2 is a ten-voice polyphonic granular synth with a complex modulation system. A deep and rewarding synth, Quanta 2 is also a fully-fledged MPE-supporting playground. You can assign any of your MPE controllers' 5D sources to any of its parameters.

www.audiodamage.com

Modal
Cobalt8
From $600

Modal's Cobalt8 sports a dense virtual analog synthesis engine, a 512-step sequencer and a nuanced waveform architecture. With the arrival of MPE support to Modal's synth range, the blue behemoth can be cracked wide open, allowing graceful note transitions and gesture-based modulation control.

www.modalelectronics.com

Arturia
Pigments 3
$95

Arturia's multi-hued soft synth engine is one of the most feature-packed non-hardware synth offerings out there, so the ability to tunnel even deeper into performance control with MPE support is tantalising. Most presets are MPE-ready, and you can route and edit filter and wave parameters via your instrument.

www.arturia.com

ASM
Hydrasynth
$1,257

A 49-note beast boasting 8-voice polyphony and advanced wave-morphing abilities, the Hydrasynth is a desktop synth with seemingly limitless scope. Add in MPE control and we're convinced you'll be navigating its aural universe until the end of time.

www.ashunsoundmachines.com

UVI
Falcon 2
$360

UVI's Creative Hybrid Instrument allows for the mixing, matching and modulation of samples, synthesis modules, FX and event processors. This software is welcoming of any and all MPE controllers, allowing pitch and modulation control via MIDI learn or manual assignment.

www.uvi.net

ROLI
Equator 2
$238

While the other synths we've selected allow MPE control, ROLI's Equator, now in its second incarnation, is dedicated to 5D control. With 1,400+ acoustic, electronic and hybrid presets, getting hold of Equator should be a must for anyone taking their first steps into the world of MPE.

www.roli.com

The history of deep control

MIDI's expressive potential has always been there, right from its inception. Yet it's mainly thanks to those few who realized how it could be deployed, and imagined new ways of performing that we have such a huge range of options today

As electronic musicians, we can't deny the fact that we've occasionally glanced across at our real-world instrument-toting colleagues with more than a whiff of envy. Sure, with our hefty plugin arsenals, sample libraries and pristine-sounding virtual instruments we can assemble astonishingly dense tracks and lush aural worlds. But the immediacy of say, an accomplished acoustic guitarist, picking up their instrument and immediately navigating their way around every possible nuance of a note, zoning in and becoming one with their instrument via the ability to deploy natural per-note vibrato, bending and feel-based expressiveness makes us more than a little dissatisfied with the basic up/down of our MIDI controller's mod wheels.

To bridge this all-important gap between performer and music, greater emphasis on per-note articulation is required. Previously, if you had, say, wanted to apply some expressive pitch-bending on the root note of a chord, you would need to laboriously record the chord's notes individually and apply bend to just the note needing the bend. Not only is this more time consuming, but it's a very detached way of emulating free-form expression. With the MIDI Polyphonic Expression (MPE) standard, each note becomes its own channel, with distinct parameter options even when played simultaneously with other notes. While this doesn't sound all that revolutionary, the end result grants the ability to get extremely versatile, feel-based reactions from your instrument, as it responds more in simpatico with how your hands are interacting with the keys.

Another dimension

To fathom the elaborate nature of directional control, it's important to get a handle on how MIDI fundamentally operates. Originally conceived as a standardized means to link together electronic instruments back in the early 1980s, MIDI communicates digital

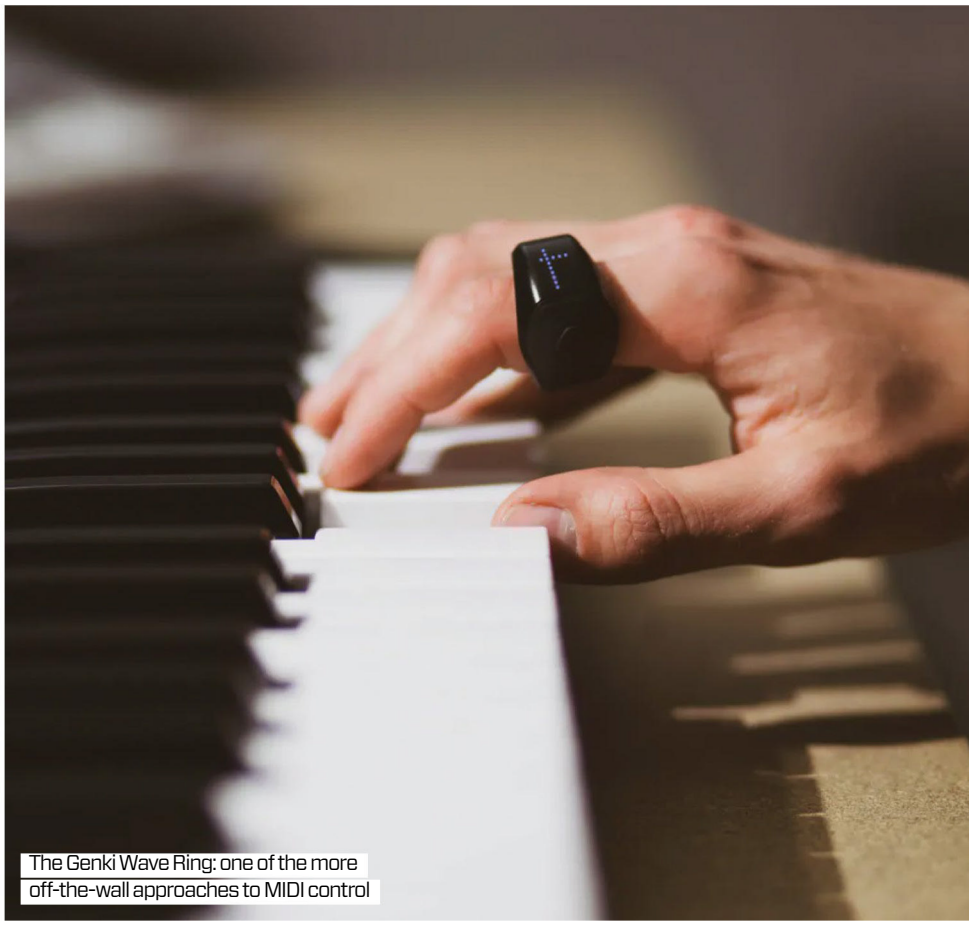
information relating to the inputs on your MIDI keyboard or instruments. Initially targeted at linking standalone digital instruments, MIDI would grow into the default means of controlling virtual instruments once home production became feasible.

Atari were among the first to harness a MIDI interface as standard in their ST computers way back in 1985. From that point onwards, MIDI would allow generations of computer musicians the means to program and perform their music, albeit lacking the fine control that 'real' musicians had over their instruments.

While dissatisfaction with MIDI's shortcomings had been rumbling since the late 1980s, it wasn't until the mid-2010s that people first became aware of MIDI's expression potential, thanks to MPE.

MIDI can apply channel-wide messages (such as modulation and pitch bend) to all the notes currently being played on a keyboard, but MPE allows up to five dimensions of control for each single note, allowing complete navigation of its aural universe. It's for this reason that a standard MIDI keyboard just isn't going to cut it in the MPE domain. To that end, an array of vibrant controllers and instruments have been purpose-built to get the best out of the multi-dimensional opportunities that MPE presents.

At the vanguard of the charge has been ROLI, with their squidgy-keyed Seaboard and the snap-together Blocks devices, and Roger Linn Design's futuristic and innovative LinnStrument. The LinnStrument mirrors the uniform semitone spacing of real instruments, allowing for realistic glides and vibrato. Then there's the futuristic Joué Play and its various interchangeable pads, allowing one simple touch surface to be the hub of your physical performance. As with any real-world instrument, these options require some degree of learning to use to their best, but the sonic rewards are undoubtedly much wider.

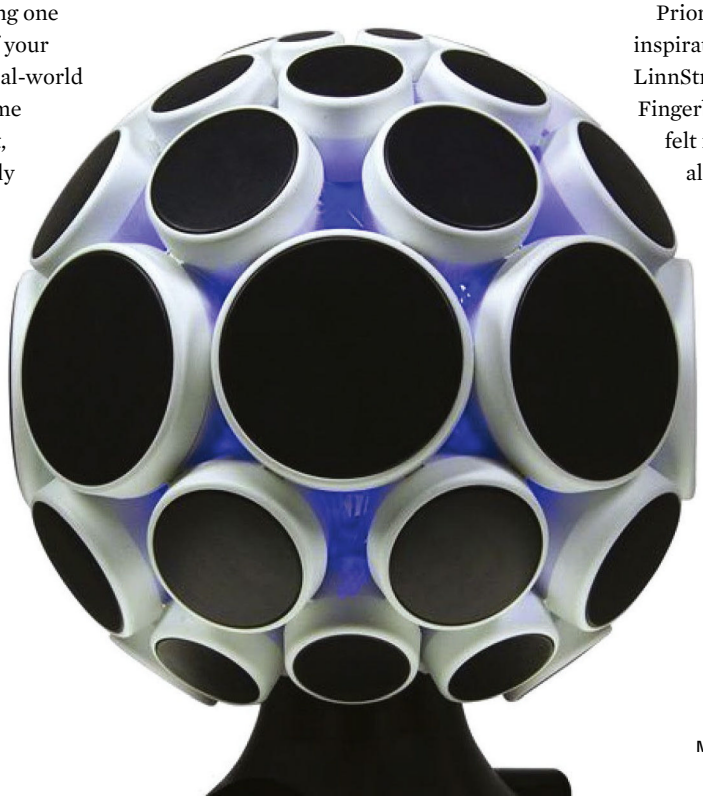


The Genki Wave Ring: one of the more off-the-wall approaches to MIDI control

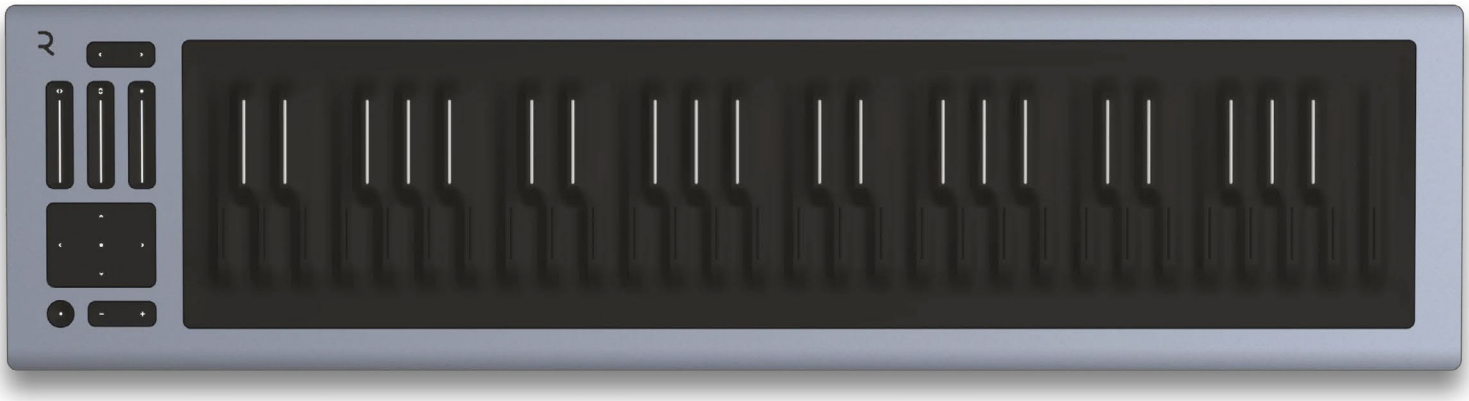
World In Motion

Though MPE has undoubtedly triggered an influx of new creative control concepts, there's also been an upswing in more off-the-wall approaches to standard MIDI control over the last few years. Take the Wave Ring from Genki Instruments, a wearable ring that can manipulate modulation effects and control-assigned CC values by gesture, rotation, tilt, panning and more. This type of thing might be something you'd rather use behind closed doors, but when it comes to such elements as reverb, vibrato, sample triggering and pure performance, getting those arms and hands moving in a totally different way will lead you down paths a conventional approach wouldn't. Then there's the likes of Artiphon and their strummable Instrument 1, allowing an adaptable real-world way-in to your music (and resembling something the *Star Wars* cantina band would likely be wielding), with presets for all major acoustic instruments.

Prior to the rise of MPE (and a major inspiration on Roger Linn's development of the LinnStrument) came the Haken Continuum Fingerboard. First released in 1999, a distinctive felt red and black neoprene control surface allowed natural glides between notes and expressive performance control, with up to three dimensions of control. The Continuum Fingerboard worked by feeding constant data to its internal engine, corresponding to finger position and pressure, across a musical range totalling 9,350 cents. Far more control was therefore at the fingertips than had previously been dreamed. Haken still produce the Continuum Fingerboard, and there are many adept players of the



The 'wizardy' AlphaSphere asks: how weird do you want to get?



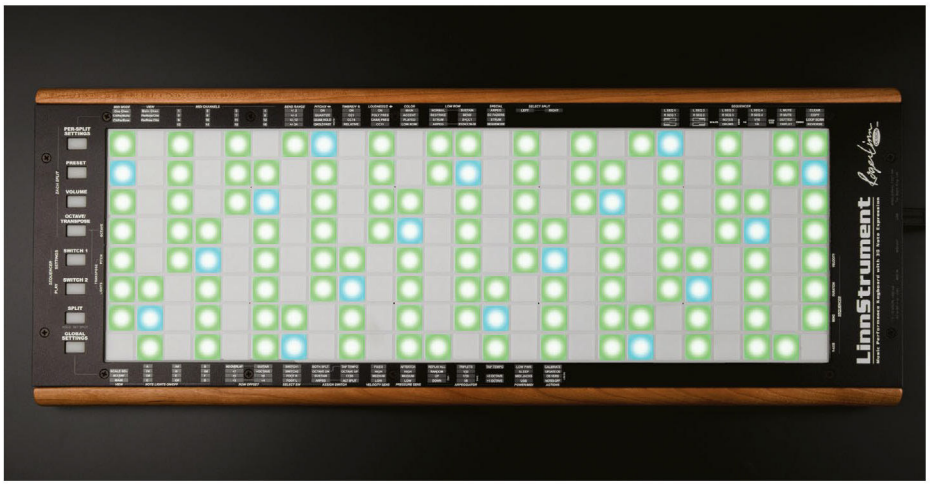
ROLI have been at the vanguard of the charge with models like the Seaboard

instrument around the world. There's even now a slimline version (the ContinuuMini). Its legacy, as one of the most high profile forerunners of MPE, ensures it will live long in the annals of music technology.

In contrast, MPE's five control dimensions encompass the strike velocity, the release velocity and the horizontal movement (X), vertical movement (Y), as well as the finger pressure (Z). All of which, when snapped MIDI CC, and used to modulate parameters such as volume, LFO, resonance or processing, can make sound design a much more organic process. But to really get the best from an MPE controller, the best approach is not to view it as simply a glorified mod wheel, and instead work to enmesh your performance approach with its hyper-sensitive pads and surface, learning to think of your new controller as more of an instrument than an accessory.

> "The legacy of Haken's Continuum Fingerboard means that it will live long in the annals of music technology"

So, if you've yet to take the plunge into the world of weird and wonderful alternatives to standard MIDI keyboard control, then over the course of this feature we've hopefully convinced you that expressive controllers can wholly re-shape how you think about crafting and recording your music, as well as indicate new routes for experimentation and creativity. Stay tuned for more tutorials in future issues as we take a deeper look at the ways these tools can be used in the studio.



The LinnStrument (above) and Haken Continuum (below): almost otherworldly looking devices

Imogen Heap's Mi.Mu gloves require some serious arm and hand movement

Photo: Timothy Norris/Getty

There's weird, and then there's...

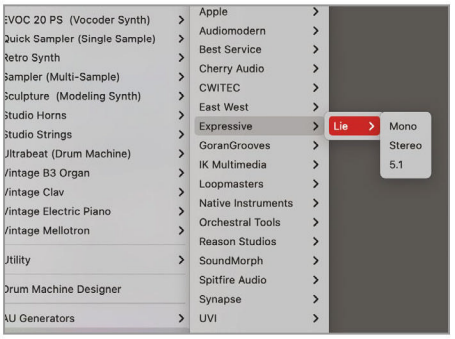
Weird controllers can be a hoot to use, and more importantly can completely upturn our typical approaches to music-making, particularly if we're starting to feel they've gone a tad stale. But some controllers do exceed perhaps the frontiers of how 'weird' we're prepared to get. Take the AlphaSphere, a mechanical ball with numerous circular touchpads that detect pressure, velocity and position. Writing music with this thing might be fruitful, but it's all but guaranteed to make you feel more than a little 'wizardy'. Speaking of which, Mi.Mu gloves – launched by Imogen Heap – are wearable gloves that interpret your hand movement in a variety of ways, with a motion tracker, flex sensors on the fingers and haptic motors that give feel-based feedback. To use them effectively requires some serious arm and hand movement.

Integrating the Expressive E Touché

Step by step How to use the E Touché

01 Expressive E's Touché is a fantastic means of taking your first steps into multi-dimensional control. We've recently acquired one and we're going to explore how we can use it to augment and enhance our performance.

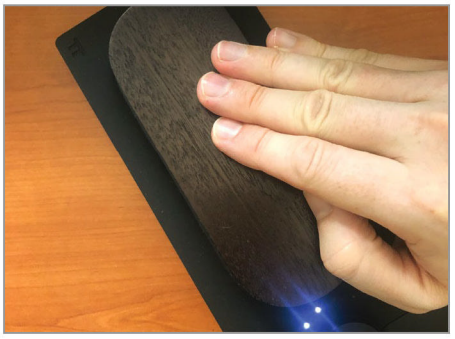
02 Firstly, we'll need Lié, the accompanying software which enables Touché to interface with our DAW. Downloading via the Expressive E website, we activate the software and allow it to scan our VST plugins.



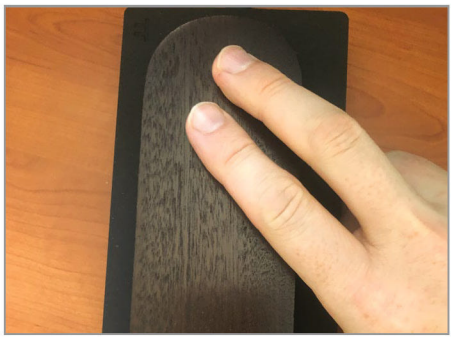
03 Firstly, we'll need Lié, the accompanying software which enables Touché to interface with our DAW. Downloading via the Expressive E website, we activate the software and allow it to scan our VST plugins.

04 Within the Lié shell we can open up a sub plugin instrument and map parameters to our Touché. We're going to use one of our favorite sound design synths, Absynth 5.

05 Using Lié's Speedmapping tool – which appears atop the sub-plug-in's window – you can lock parameters in your soft synth to one of the Touché's 8 slots, (simply by clicking on both of them at the same time) These correspond with movement on the Touché.



06 Assigning effect levels, oscillators, LFO and more interesting sound morphing parameters to our up, down, left and right areas of the Touché, interesting intermediate sound states can be constructed, and gradually explored.



07 While hard pressing each area of the Touché will instantly trigger a selected parameter, the smooth surface of the central pedal allows you to gracefully glide between states, and intermingle them in interesting ways.

08 Using the Sensitivity Curve Editor, we can change the sensitivity of our Touché, and adjust how it will affect the movement of each slots' parameter based on our expression, via a horizontal and vertical axis.

09 Adjusting the unit's physical internal slider can add precision (by moving it to the top) or sliding down to allow for a looser quality. Touché is a graceful road into exploring multi-dimensionality.

16 QUESTIONS WITH...

Lewis Thompson

Lewis Thompson is one half of DJ duo Just Kiddin' and also partnered David Guetta for last year's huge hit 'Take Me Back', which has so far been streamed over 20 million times. He has production and writing credits on eight Top 10 UK singles, but as one of the most prolific dance producers out there, that is just the start of it. Time for 15, actually 16, answers please...

Ever worried that you haven't got the talent to make it big in the music business? Well, take a leaf or two out of Lewis Thompson's book. He might not have the self belief either, but he certainly has the sheer determination, hard work ethic and, well, isn't afraid to exaggerate when it comes to the truth on occasion. And now he's had a smash hit with David Guetta, and produced and co-written some of the UK's biggest hits. These include Joel Corry's 'Sorry, Lonely' and 'Out Out', the number 1 single with MNEK Head & Heart, plus Anne-Marie and Little Mix's collaboration 'Uh Oh', not to mention the international smash 'Crazy What Love Can Do' with David Guetta, Ella Henderson and Becky Hill. Who needs talent then? He's also got some great words of wisdom...

1 How did you start out in music production in the first place?

Lewis Thompson: I've always had a curiosity for music. I played guitar in bands when I was younger but never got anywhere. I really got into electronic music a few years before university. When I got to uni I met a club promoter on a night out and told him I was a pretty established DJ. This was a complete lie – I'd never touched a pair of decks in my life! The next night he texted and asked me to come down for a set, I almost ignored the message, but instead, ran to the shop, burnt some of my fave tunes onto CD, showed up and somehow blagged it. It was almost definitely an awful set, but that decision to show up and play was definitely one of the best I've made. It changed

my life as I caught the bug for DJing, which led me to make my own records.

2 When and how would you say you became successful, or at least able to make a living from music?

LT: The main reason why I believe I've had any success is from my drive, determination and resilience. I've been so used to people telling me 'no'. At school I wasn't allowed to study music, because I couldn't read sheet music. I've had so many managers , A&Rs and record labels tell me 'no'. Handling rejection is such a big part of it. But as bad as rejection feels, proving people wrong feels so much better. I've always been quite competitive, so that's how I thrive. Also, being good at anything takes time. I'm a big believer in the 10,000 hour rule. I started making music in 2008 so this has not been an overnight success by any means. Talent will get you so far, but the majority is how much you want it. I've never really believed I'm particularly talented, this is what really grounds me and makes me work harder than others.

3 What is your production philosophy?

LT: I'd say simplicity. Simple always wins, be it a melody, production, arrangement, lyrics etc. As soon as one of these elements is over-complicated, I think the song suffers. Secondly, I'd think about why you're making music. I make records for myself and try to create things that I find exciting. If you start making music for other people or to make money then you're probably in the wrong industry.

4 When did you discover the computer music route to music production?

LT: I downloaded Ableton in 2008 and it changed my life. I just found it fascinating how I could sketch ideas down and start creating. Me and my brother would sit at home for weekends on end messing around on Ableton.

5 Tell us about the gear in your studio

LT: For my monitors I've recently invested in some new PMC 8-2 speakers, which I'm loving working on. For my microphone I've got a Neumann u87 Ai but have just purchased a Sony C800G which I can't wait to use. This mic chain then goes into a 1073 preamp followed by a Tube-Tech CL1B- meaning my vocals are sounding pretty nice before they're even in the box. I've then got a synth collection including a Roland Juno-60, Moog Sub 37, Sequential OB-6 and recently an UDO Super 6, which might be my favorite of the bunch. All these route into a patchbay so I can send them into any preamps or compressors I might want to.

6 What are your favourite plugins?

LT: u-he Diva. The ultimate analog emulation, it's definitely the closest virtual synth I've found to the real thing. I love how easy it is to use and how versatile it is – the templates for different synths are really useful.

Also, VPS Avenger. I used the Vengeance sample packs when I first got into making music so was keen to try this synthesizer out. The sounds are just so 'finished', I really love it. Everything from synths, basses, pianos, strings, guitars – it's got it all. People love Nexus but I think this is way better.

Then there's Soundtoys Bundle. I love how experimental Soundtoys plugins make me. It's so good for those 'happy accidents', especially with the Effect Rack presets where you can use multiple plugins at once.

Plus, u-he Repro. This models the Pro-One synth, which I love the sound of. It's great for bass sounds, arps, leads and sounds exactly like the real synth.

Lastly, Sonnox Oxford Envolution. The best transient shaper I've ever used. It's super visual and easy to understand how you're actually shaping a sound. Great on drums!

7 How do you tend to start a track?

LT: I usually start with some sort of basic chord or melody, just an 8-bar loop to start building a song around. I have a huge folder of chord progressions and melodies I make. I'll just have a day of creation where I mess around in one project with no judgement and save anything I think is good. I then bring these banks of chords/loops into sessions to write to. I've learned that bringing in a fully-produced record into a vocal/writing session is really limiting. Writers want freedom, so keeping things stripped back is really important. I don't even mess with drums until we have the basic song written. Sometimes myself or another writer will have a vocal melody too – that's a fun way of writing. From that melody I'll try and figure out some chords or bass notes that feel right with it. It's the reverse approach to the above.

8 Do you have any production tricks?

LT: I don't have loads of different tips or tricks with production, if I'm honest. I usually find the best ideas happen as mistakes – selecting the wrong preset or putting the wrong plugin somewhere. So make sure you create an environment with yourself and others where mistakes are welcome; they make the best ideas. One thing I do differently is commit a lot quicker to sounds. This started out of a limitation, because my old Mac was starting to get really slow and laggy. So, I got into the habit of bouncing synth/bass sounds out as soon as I made them, and seeing it as audio in Ableton.

Basically it's the same approach to using analog gear, where you think 'close enough, let's commit'. I think the decisiveness of it makes you work so much faster; it stops you from tweaking and dwelling.

9 How do you know when a track is done?

LT: I know some people who never think songs are finished and keep pushing, version after version, until it's done. I don't really work in this way and usually the best records happen really quickly and I'm not even thinking about it. I go into a state of flow and two or three hours later, I come out with something. If a song is taking forever to complete, something isn't right. The best songs are the easiest to produce and finish, so maybe the song isn't right? Maybe it's the arrangement? Or the sound choices in the production? If I'm finding something really difficult to finish, I'm learning to put it down and let my mind sit on it for a few weeks.

Somewhere down the line, a few weeks or months later, an idea will come to me on how to finish it.

10 What's on your gear wishlist?
LT: A Sony C800G, Telefunken 251, Roland TR-8S, Roland SH-101 and Chandler TG-2.

11 Are you involved with any collaborators on your projects?
LT: I'm always collaborating in every project I'm involved in. Individuals rarely make records; it's teams of people. When I first started making music I wanted to do everything on my own, from song writing to mixing. Looking back in hindsight, this was ambitious but a bit of a mistake. Being open to collaborate with writers, producers and singers really changed my approach to making music.

Today, I love collaborating with people. I'm lucky to have some amazing people around me that I do this with, that have turned out to be some of my closest friends, too. The biggest hurdle with collaborating is communication. When you're in a session, it's vital to read the room and make sure everyone is on the same page, heading for the same end goal. If one person is heading in a different direction or something isn't clear, you'll end up with a messy hybrid song that's been shoe-horned with multiple ideas.

12 Which track do you wish you'd produced and why?
LT: Calvin Harris' 'We Found Love'. I find it hard to process that Calvin is the only writer and producer on this record – 100% to him. That's so rare to see, some songs have 15 writers and four producers on them! The writing is so clever and smart. I love how the verse melody mirrors the chorus so it's already familiar. That chorus lyric is just so relatable too. Fair play, Calvin.

13 Any advice for playing live?
LT: Advice here would be to make sure you're prepped. I learned this the hard way. If you've got gigs coming up, take time away from making records and dedicate time to being prepared for a set or live show. Sort out playlists, make edits, prepare for different crowds etc. I really feel like so much of the work is done before the set. And showing up feeling really confident you've done your homework really comes across, too.

14 What about studio advice?
LT: First, make sure you're showing up and putting the time in. There's thousands of people that would kill to make music for a living, so don't forget that. If you're not focused and putting time into perfecting your craft, someone who wants it more will come and get it. Second, figure out your process and stick to it. I like to go into sessions prepped with loads of songstarters to vibe with. Find your way and stick to it.

15 And do you have any other advice from the industry that you can pass on to readers?
LT: Be resilient, embrace rejection and stay humble. The music industry is a relationships business. If you want long-term success be nice to people and work hard.

16 What do you have planned?
LT: 2023 is going to be a big year for me. I love making records and not overthinking it, so I plan on putting a lot out. I've got collabs coming with both Sonny Fodera and Paul Woolford, followed by some new solo records. I'm really excited about this year, I feel like I'm sitting on some of the best records I've ever made. ■

Lewis Thompson's latest release is out now on RCA, called 'Enchanté': "It is my second single as a solo artist following 'Take Me Back' with David Guetta last summer. It's got the amazing Clementine Douglas on vocals. Hopefully you are all hearing it on radio and streaming platforms right now!"

HEAR MORE

Take Me Back (with David Guetta)
bit.ly/CM_TakeMeBack

Enchanté
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Trikk

Trikk gives us the lowdown on the studio setup behind his new album *Fauna & Flora*

Since his 2011 debut, Portuguese artist Trikk has carved out a reputation as an inventive electronic musician, inhabiting various musical guises across a miscellany of club-focused EPs for Drumcode, ManMakeMusic and Innervisions. On his latest release, *Fauna & Flora*, Trikk explores the creative potential of a full-length project for the first time, voyaging beyond the boundaries of the dancefloor towards uncharted stylistic terrain.

Produced in Innervisions label head Âme's Berlin hardware wonderland of a studio, *Fauna & Flora* channels post-punk's restless malaise into hard-edged, invigorating electronic music that wears its DIY spirit on its sleeve.

We caught up with Trikk to find out more about how the album was made, his unique approach to sampling and his love of FL Studio.

When did you start making music, and how did you first get started?

My first genuine interest in understanding music happened when I overheard some peers I was sharing a room with playing the djembe. They were making amazing rhythms out of it and I got fascinated by it. At that time I was 11 years old and was living in a juvenile centre due to family related problems – it's a long story. Long story short, I ended up living with 50 more kids for eight years of my life, and those kids were the reason why I started to make music. Firstly, being introduced to these instruments by them, then playing them together.

This was followed by experimenting with software, when it became a true democratic system – all of a sudden everyone could just download it and start making music and that's what happened to me too.

Tell us about your studio/setup...

My studio setup has always been the same since I started to make music on my computer.

Along the way I bought guitars and basses. I very much enjoy the feeling of freedom you get when you get to make music anywhere in the world, and that is something I have tried to hold on to since the beginning. From working in coffee shops in London to hotel rooms in Japan – the simplicity of minimal or physical constraints, which on its own are a limitation, free me.

For this album in particular, I had the opportunity to use Âme's studio in Berlin; it's a wonderland for hardware, a private museum of amazing instruments. I remember one of the first times I went there to work on the album that I felt so overwhelmed that I just stood still and couldn't really work it out for hours, my mind was overloaded with possibilities. In the end I had to find a good balance between using my method and being inside a studio like this.

I still prefer to make music on my computer only, to be completely honest.

What DAW (or DAWs) do you use, and why did you choose it?

FL Studio. It's simple, direct and offers great sample editing possibilities. I'm a romantic and this software allowed me to become who I am today as an artist. It's so democratic; people that

wanted to start to make music had the possibility without money or help to suddenly create something out of nowhere and for me that's one of the biggest things music software gave to humanity.

It gives you a platform, it empowers you, gives you happiness, sadness and all in between. It literally saves lives and gives people a purpose, in low income areas specifically. It's more than software in the end, if you look at it deeply.

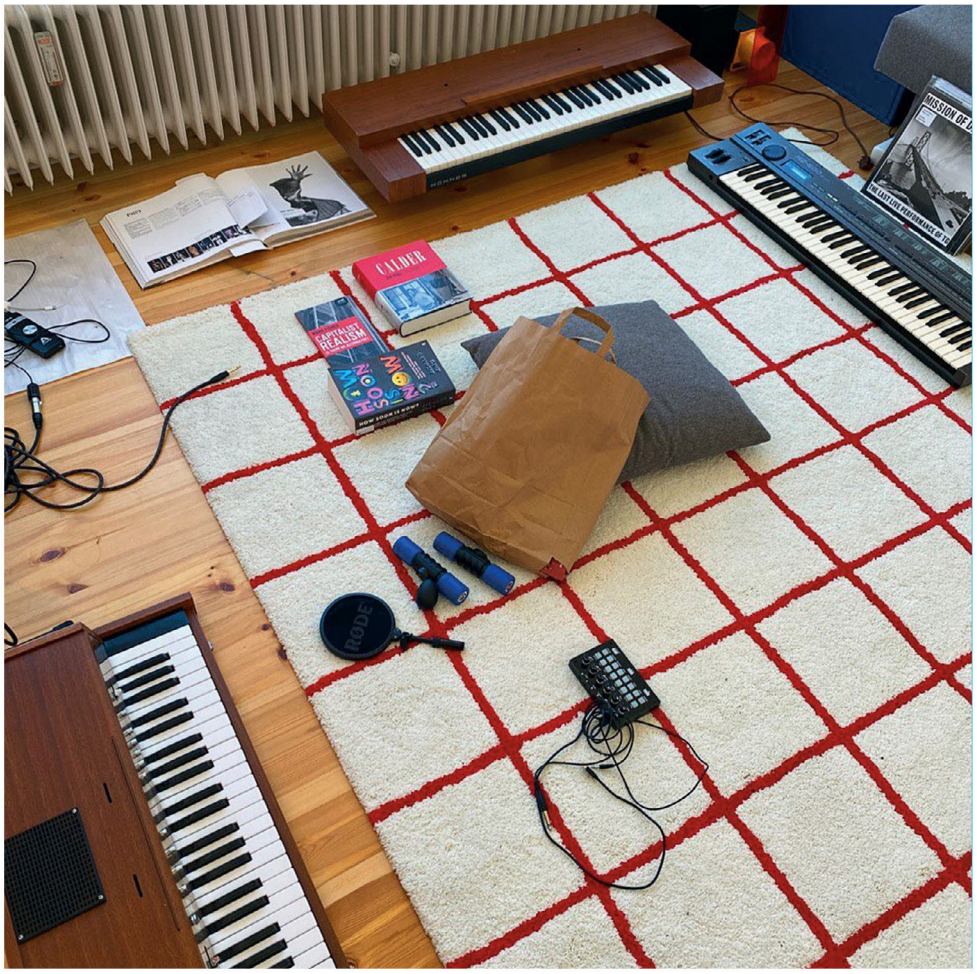
What one piece of gear in your studio could you not do without, and why?
My computer, for obvious reasons. But I bought an Ibanez Acoustic Bass a few years ago and I cannot leave it alone. The character and life it adds to the music, it's quite something, a must-have for me.

What's your latest studio addition?
Arturia Dist Coldfire. I'm still learning, but it instantly gives you something and that's the way software is made today. Their selling point is instant gratification, which can be good and bad. On the one hand, once you open it and run through something it's amazing straight away. On the other hand it makes your brain lazy and you cease to look at your own interpretation of the software, and building presets from scratch doesn't seem a thing anymore. I needed new distortion ideas and found this one and I'm happy with it. But in general I tend not to buy too many things. Limitation is key and optionality can be very detrimental.

What dream bit of gear would you love to have in your studio?
Probably AKG BX-10 or BX-20, EMT 140 or Grampian Reverberation Unit Type 636.

Where do you start on a new track?
I mainly work with samples, so every time I'm starting something, I have to be listening to a sample I freshly got from somewhere. It could be an obscure '80s Spanish synthwave sample or a rhythm loop from a traditional instrument from Ghana; the source will always be random as long as it is interesting.

90% of my music is based on reappropriating sounds and recording techniques. I have a very big collection of samples I've been gathering for a few years from all kinds of sources: tapes, vinyls, and digital. After that I start layering sounds and might add a guitar, bass or using a plugin like Reaktor's Razor to add a melody to it. The character and feeling for me is the important part; it might not be the catchiest track but it has to have that feeling we cannot put into words .■



TRIKK'S TOP TIPS

Go your own way

1 There are no rules and if someone like me tells you to do something a certain way, question it first and only later see if it can potentially work for you. Many times I have wondered how to achieve a certain sound or idea that I listened to somewhere else, and once I managed to actually recreate it, that idea never really sounded right. Because it's not yours and it's not part of your musical DNA. It might sound good when you listen to it but in the end you have to discover your own way to do things, representing who you are and all your experiences.

Embrace happy accidents

2 Experimentation is underrated. I touched on the subject of modern plugins giving you a taste of what you can do, and that instant gratification aspect can sometimes stop new artists from experimenting and failing in those experiments. How many times do you hear your favorite artist saying that a specific sound they created was actually a mistake? Far too often. And that you can only get it if you get out of your comfort zone. Open your software and don't think of an end goal, just write. You will lead yourself into something that might surprise you.

Try a transient designer

3 Technically, I personally use SPL Transient Designer on everything. I like to tighten all sounds that are occupying way too much space on the frequency range. Generally that muddy feeling that you get starts getting better just by adding this plugin and working with it often. Because my music is sample heavy there's a lot of noises – sometimes wanted and sometimes unwanted – that come with it. SPL helps me immensely and you can also use it as a creative tool, for example, making the decay shorter or longer on your samples.

Vital Vocals

Blues Rock Acapellas

$30

Some seriously heavy vocal samples up for grabs inside this quality pack of blues-infused singing sessions. Choose from lead work, backing tracks, off-the-cuff adlibs, and other lyrical layers, full of stank-faced grit and soul.

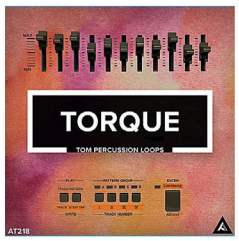
This 1.61GB set of royalty-free pipework is broken down into song kits, with all the acapellas captured in stunning quality. And each group or solo line is primed and ready to get chopped up, or slipped over your funkiest productions.

There are really outstanding and powerful performances, throughout. Raw and authentic. With flashes of the Delta greats, up to the more modern growls of Jack White and the like.

They say you can't sing the blues until your second divorce. Dang. I just hope these guys can still see their kids.

Roy Spencer

loopmasters.com



Audiotent

Torque

$26

Audiotent have whipped up a nifty set of tom drum grooves for y'all. The 107-strong selection has been carefully coaxed, captured and recorded, then run up the processing flagpole until each rhythmic loop is pumped and punchy. The emphasis here is on the low end, with all the tom lines on offer weighty and whomping. Packaged as an alternative to your bog-standard synth bottoms, this section will give a unique, playful take on your next track's deep bass business. From urgent and panicked to emotive, dusty and pulsing, each thumping, characterful loop has been designed to give your beats real torque. Roy Spencer

audiotent.com

Vocal Roads

Apocalyptic Vocal Future Beats

£30

With a title like that, you'd expect End Of Days wails. But this sugary-sweet selection of trappy pop acapellas couldn't be further from that, with the five lyrical construction kits here feeling like they're filled with cheery, radio-friendly bubble gum sing-songing, in which butter wouldn't melt.

However, give it a minute to clock the darker subtext at play; all the zombies, murder, and the apocalyptic themes that run deep, making for an innocent looking, but sinister selection of vocals, perfect for soundtracking our long overdue Armageddon.

Roy Spencer

loopmasters.com

Splice Originals

Sahara Malian Afrobeats

From $7.99/mth

Give your Afrobeats a sonic shot in the arm with this lovingly assembled selection of loops and one-shots from the studio files of Senegalese producer Iss 814, alongside Samba Traoré, a gifted guitarist from Mali.

The pair explore a whole host of past and present West African roots and rhythms, all of which are interwoven harmoniously with vitally modern takes on drum programming, dubby subs, and club-ready tops and synths, combining into a groovy, upbeat, poppy set of shapes and sounds to suit well-traveled tastes.

Roy Spencer

splice.com

Sample Magic

Dreamy Indie & Lo-Fi

From $7.99/mth

Wistful, warm and fuzzy feelings mix with woozy bass sounds, shiny guitar twangs and rose-tinted nostalgia, on this set of lo-fi indie rock loops.

Drawing on the glory years of DIY labels and their long anonymous cassette tape heroes, this collection hits all the right notes for producers wanting to plump their sample crates with bedroom beats, lilting vocals, and sweet melodies.

Special shouts go to the thick and forlorn tape-enriched pad sounds, breathy singing, and drum machine thumps, which round out the other choice offerings real nice.

Roy Spencer

splice.com

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75 AKG YEARS

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